

AD-A169 826

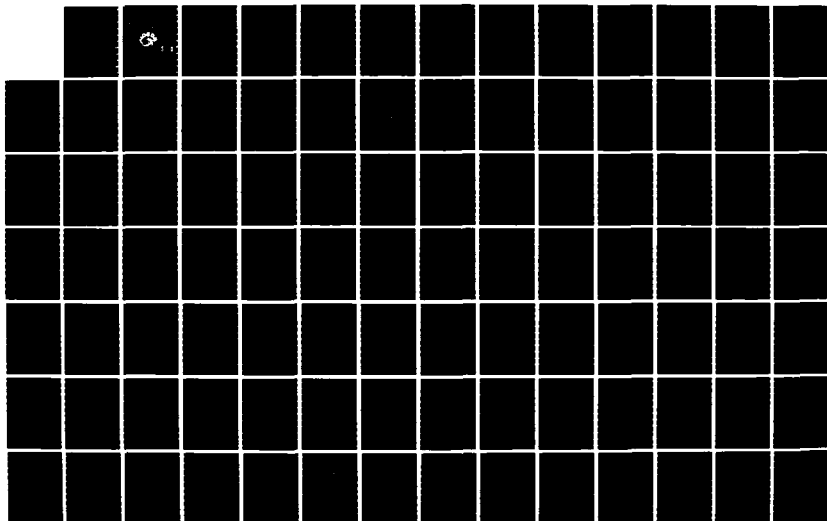
NAVY CORRECTED GEOSTROPHIC WIND SET FOR THE GULF OF
MEXICO(U) JAVCOR ALEXANDRIA VA R C RHODES ET AL.
MAR 85 NORDA-TN-310 N00014-85-R-0578

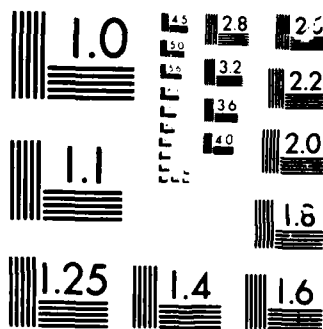
1/2

UNCLASSIFIED

F/G 4/2

NL





12

NORDA Technical Note 310

Naval Ocean Research and
Development Activity
NSTL, Mississippi 39529

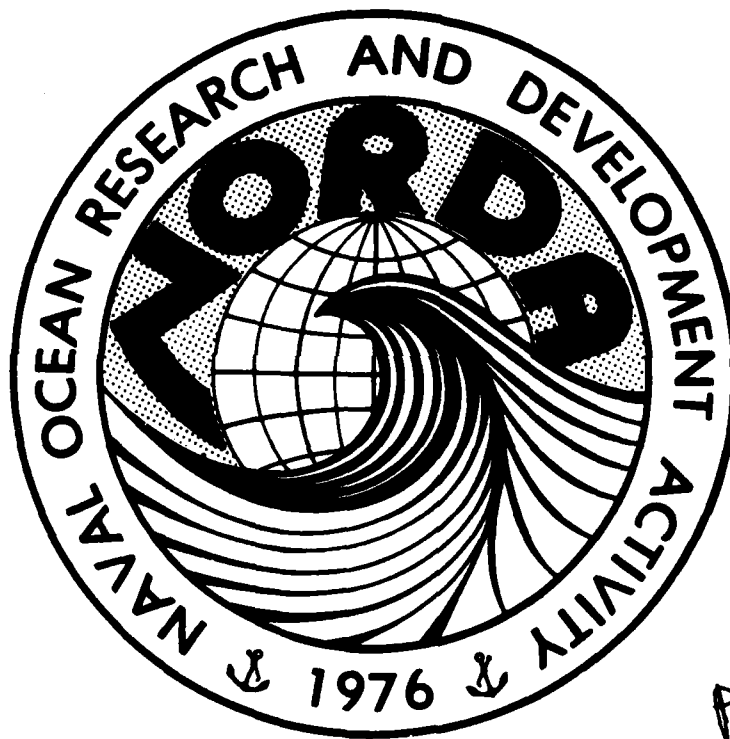
Contract N00014-85-R-0578



Navy-Corrected Geostrophic Wind Set for the Gulf of Mexico

AD-A169 026

DTIC FILE COPY



DTIC
SELECTED
JUN 24 1986
S D

Robert C. Rhodes
Alan J. Wallcraft
JAYCOR
Alexandria, Virginia

J. Dana Thompson
Ocean Science Directorate
Ocean Sensing and Prediction Division

March 1985

Approved for Public Release
Distribution Unlimited

86 6 24 044

ABSTRACT

The large variability of the Gulf of Mexico wind field indicates that high-resolution wind data will be required to represent the weather systems affecting ocean circulation. This report presents methods and results of the calculation of a corrected geostrophic wind data set with high temporal and spatial resolution.

Corrected geostrophic wind was calculated from surface pressure analyses compiled by the Fleet Numerical Oceanography Center. The correction factors for wind magnitude and direction were calculated using linear regressions of observed Gulf buoy winds and geostrophic winds derived at the buoys. The regressions were done for each month to determine the seasonal variability of the correction factors. The magnitude correction was found to be nearly constant (0.675) throughout the year, but the direction correction varied as a sine function dependent on the time of the year.

The corrected geostrophic wind was calculated twice daily from 1967-1982 on a spherical grid over the Gulf, and the wind stress and wind stress curl fields were then calculated. Twelve-hourly stress and curl fields show large temporal variations of the wind field for both winter and summer months. Seasonal and monthly climatologies of the stress and corresponding curl show positive curl over the Yucatan and negative curl in the southwest Gulf, which are features not seen in any previous study of Gulf wind stress.

ACKNOWLEDGMENTS

JAYCOR was funded by contract with the Naval Ocean Research and Development Activity (NAVAIR Subproject WF59-557). The authors wish to thank Cindy Seay for her preliminary data analysis. The FNOC pressure data was provided by Dennis Joseph at the National Center for Atmospheric Research, and the buoy data was provided by the Naval Weather Service Detachment in Asheville, North Carolina.

CONTENTS

INTRODUCTION	1
DATA AND METHOD OF ANALYSIS	1
RESULTS	2
Ageostrophic Corrections	2
Wind Stress and Wind Stress Curl	2
REFERENCES	2
APPENDIX A: WIND STRESS AND WIND STRESS CURL FOR JANUARY 11-19 (days 011-019) AND JULY 11-19 (days 193-201), 1976	5
APPENDIX B: SEASONALLY AVERAGED WIND STRESS AND WIND STRESS CURL CLIMATOLOGIES FOR THE PERIOD 1967-1982	19
APPENDIX C: MONTHLY AVERAGED WIND STRESS AND WIND STRESS CURL CLIMATOLOGIES FOR THE PERIOD 1967-1982	25
APPENDIX D: MONTHLY AVERAGED WIND STRESS AND WIND STRESS CURL EACH YEAR FROM 1967-1982	41

Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	



NAVY CORRECTED GEOSTROPHIC WIND SET FOR THE GULF OF MEXICO

INTRODUCTION

In their climatological analysis of frontal activity in the Gulf, DiMego, Bosart, and Endersen (1976) have shown that frontal frequency increases rapidly from September to October. A strong maximum exists in the winter months with the duration of frontal activity approximately 1 to 2 days. Activity decreases more gradually through the spring, and very little frontal activity occurs in the summer months. The frontal activity is associated with some of the highest wind speeds and stresses observed in the Gulf of Mexico. The large variability of the Gulf of Mexico wind field indicates that high-resolution wind data will be required both spatially and temporally to represent the weather systems affecting ocean circulation.

Previous data sets have lacked the needed resolution and, therefore, are far from ideal for use in studying the dynamics of Gulf circulation. The data sets of Franceschini (1953) and Elliott (1979) both are derived from historical ship observations. The Franceschini wind data are monthly averaged stress climatologies with 2° grid resolution, while the Elliott data are seasonally averaged stress climatologies with 1° grid resolution. The data set of Blaha and Sturges (1978), supplied by Bakun (1973), is monthly averaged values of wind stress derived from surface pressure data extending continuously over the period 1946-1975. In each case the temporal resolution is particularly poor, with highest resolution being monthly. Monthly or longer averages cannot possibly represent short-term wind variability, and it would be preferable to provide the ocean model with wind data supplied much more frequently.

DATA AND METHOD OF ANALYSIS

The most promising sources for frequent synoptic atmospheric data in the Gulf are the atmospheric forecasting centers. The approach taken here is to calculate corrected geostrophic winds from surface pressure analyses compiled by the weather services. The most desirable data set is the one used to initialize the National Weather Service's limited fine-mesh model because of its high resolution over the Gulf. Only a subset of the surface pressure analysis (that does not cover the entire Gulf) has been archived at the National Center for Atmospheric Research (NCAR). The best readily available data for use in calculating the geostrophic winds are surface pressure fields obtained from the Fleet Numerical Oceanographic Center's (FNOC) 12-hourly analysis, with approximately 280-300 km grid resolution over the Gulf. This data was obtained for all available time periods from 1967 to 1982.

The pressure was interpolated to a spherical grid over the Gulf, and the geostrophic wind was calculated at three buoys in the Gulf for direct comparison with the observed buoy wind. The buoys were located at (26.0°N , 90.0°W), (26.0°N , 93.5°W), and (26.0°N , 86.0°W), and the data were available at either 1-hourly or 3-hourly intervals from 1977 to 1982.

Ageostrophic corrections were calculated by directly comparing geostrophic wind and buoy wind by using linear regressions for both magnitude and direction. Blaha and Sturges used constant ageostrophic correction factors of 0.7 for speed and 15° for direction, but these figures were obtained from a study done by Bakun using data from the west coast of the United States. Since the correction factors depend on atmospheric stability, Bakun's correction factors are not necessarily appropriate

for the Gulf. Wind stresses were calculated on a spherical grid over the Gulf from the corrected geostrophic wind using constant atmospheric density and a constant drag coefficient equal to 0.0013. This calculation is identical to that used by Blaha and Sturges. The geostrophic winds, corrected geostrophic winds, and wind stresses (all on a 1° grid covering the Gulf) will be available on separate magnetic tapes from the Gulf of Mexico Regional Office of the Minerals Management Service.

RESULTS

Ageostrophic Corrections

The data from all available years and for the three buoys were combined by month, and linear regressions performed to determine seasonal variability. The results showed that the magnitude correction factor had little variability throughout the year, but the direction correction was a function of the month and was shown to have a large sinusoidal component. The angle correction was larger in the winter than in the summer. Therefore, one magnitude correction (0.675) was used for the entire year, while the direction correction varied according to:

$$C = 17.5 + 9 \sin 2\pi i/N \quad i = 1, N \quad (1)$$

where C is the correction factor in degrees, $N = 730$, the number of observations per year, and $i = 0$ on October 1st of each year. For simplicity, exactly the same formula is used in leap years, since the variation in C over 1 day is negligible.

Wind Stress and Wind Stress Curl

Appendix A shows wind stress and wind stress curl for two 9-day periods, January 11-19 and July 11-19, 1976, with two observations per day. There is a large temporal variability of the wind stress and wind stress curls during this period, indicating why the modeling of Gulf circulation requires wind data on short temporal scales.

Appendix B shows seasonal climatologies averaged over the period 1967-1982, and Appendix C shows monthly climatologies over the same period. The wind stress and wind stress curls are much stronger in the winter than the summer as would be expected. There are persistent areas of positive curl over the Yucatan and negative curl in the southwest Gulf for both seasonal and monthly climatologies, which are not seen in any previous study of Gulf wind stresses. Appendix D shows the monthly averaged wind stresses and wind stress curls for each year from 1967 to 1982.

REFERENCES

- Bakun, A. (1973). Coastal Upwelling Indices, West Coast of North America, 1948-1971. Technical Report, NMFS SSRF 671, NOAA, Seattle.
- Blaha, J. P. and W. Sturges (1978). Evidence for Wind Forced Circulation in the Gulf of Mexico. Department of Oceanography, Florida State University, 134 pp.
- Dimego, G. J., L. F. Bosart, and G. W. Endersen (1976). An Examination of the Frequency and Mean Conditions Surrounding Frontal Incursions into the Gulf of Mexico and Caribbean Sea. Mon. Wea. Rev., v. 105, pp. 26-36.

Elliott, B. A. (1979). Anticyclonic Rings and the Energetics of the Gulf of Mexico. Ph. D. Dissertation, Texas A & M University, 188 pp.

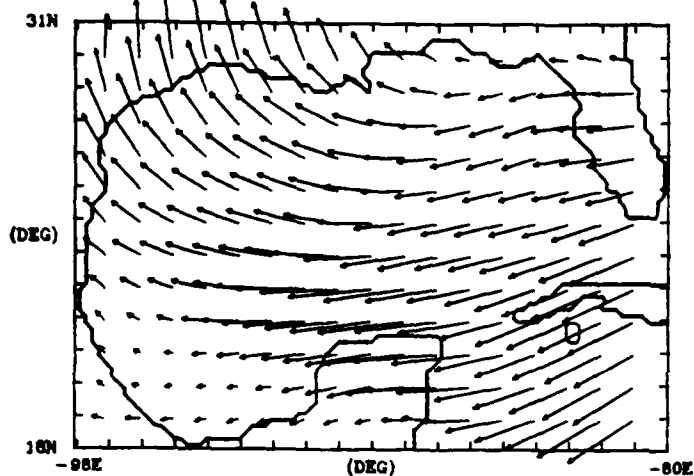
Franceschini, G. A. (1953). The Distribution of the Mean Monthly Wind Stress Over the Gulf of Mexico. Texas A & M Research Foundation, College Station, Texas, 18 pp.

APPENDIX A: WIND STRESS AND WIND STRESS CURL FOR JANUARY 11-19 (days 011-019)
AND JULY 11-19 (days 193-201), 1976

WIND STRESS

011/1976 AT 0 GMT

12

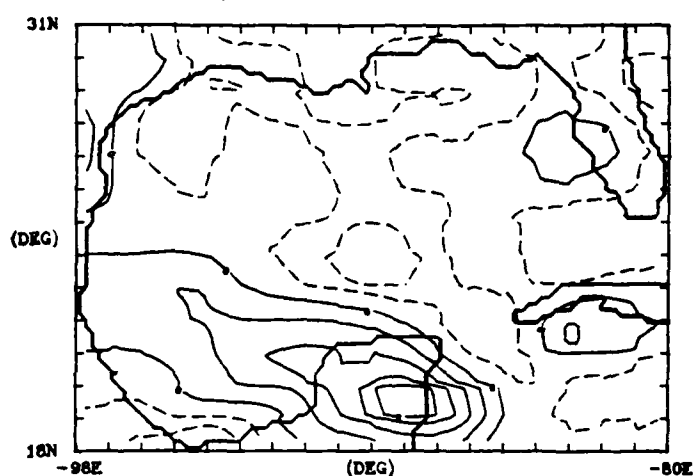


MAXIMUM WIND STRESS = 2.07 DYNES/CM²

NOBDA 773 13-DEC-84

WIND STRESS CURL

011/1976 AT 0 GMT DC = 2.0E-07 M



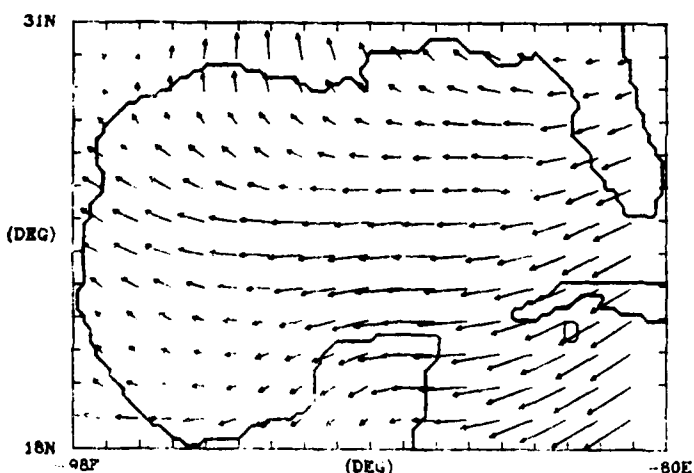
MIN = -5.96E-07 MAX = 9.43E-07

NOBDA 773 13-DEC-84

WIND STRESS

011/1976 AT 12 GMT

12

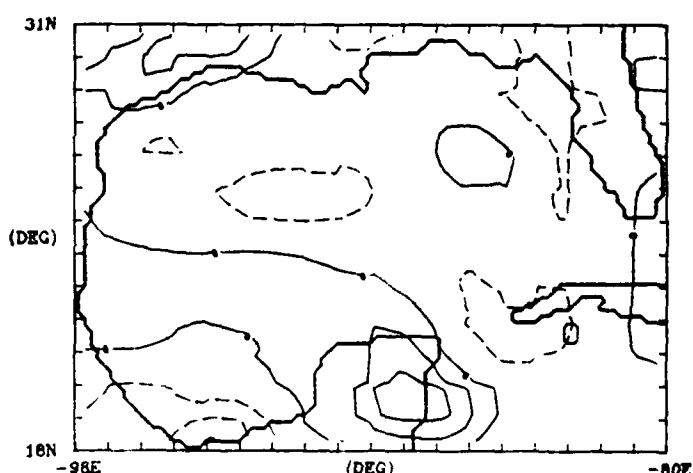


MAXIMUM WIND STRESS = 1.34 DYNES/CM²

NOBDA 773 13-DEC-84

WIND STRESS CURL

011/1976 AT 12 GMT DC = 2.0E-07 M



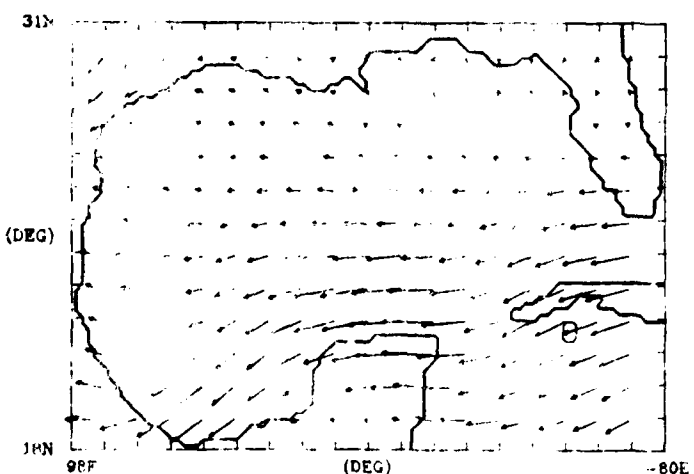
MIN = -6.16E-07 MAX = 5.80E-07

NOBDA 773 13-DEC-84

WIND STRESS

012/1976 AT 0 GMT

12

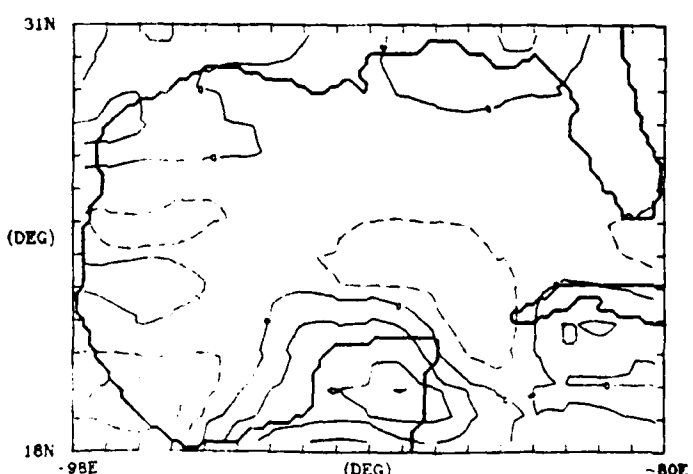


MAXIMUM WIND STRESS = 1.27 DYNES/CM²

NOBDA 773 13-DEC-84

WIND STRESS CURL

012/1976 AT 0 GMT DC = 2.0E-07 M



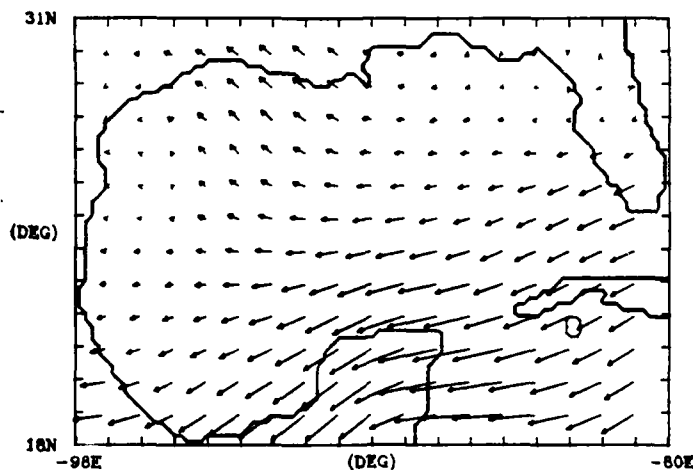
MIN = -5.95E-07 MAX = 6.09E-07

NOBDA 773 13-DEC-84

WIND STRESS

012/1976 AT 12 GMT

1.0

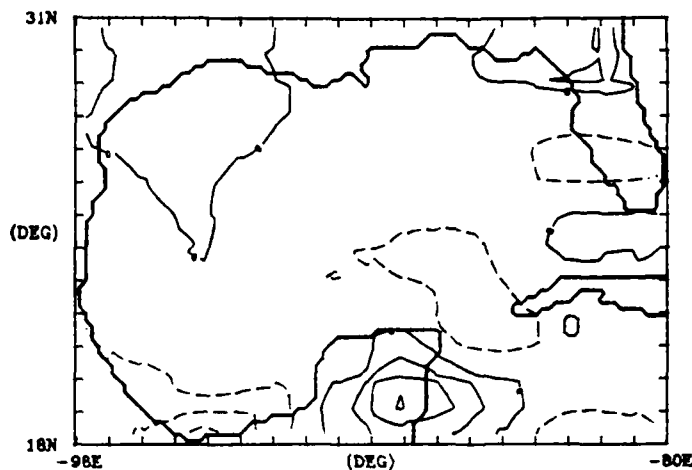


MAXIMUM WIND STRESS = 1.44 DYNES/CM²

NOIDA 777 13-DEC-84

WIND STRESS CURL

012/1976 AT 12 GMT DC = 2.0E-07 M



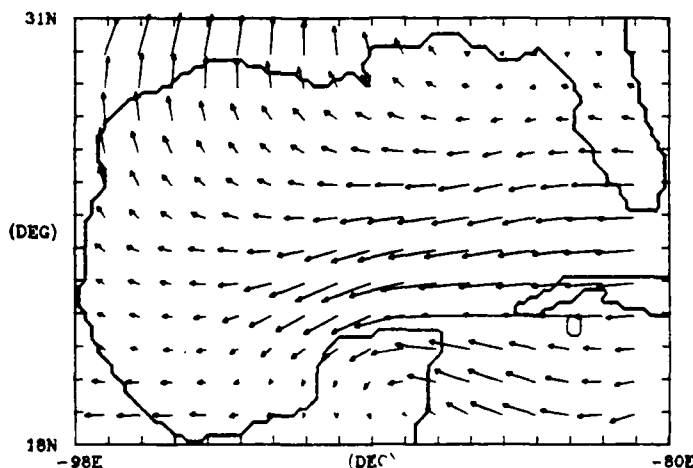
MIN = -6.71E-07 MAX = 6.23E-07

NOIDA 777 13-DEC-84

WIND STRESS

013/1976 AT 0 GMT

1.0

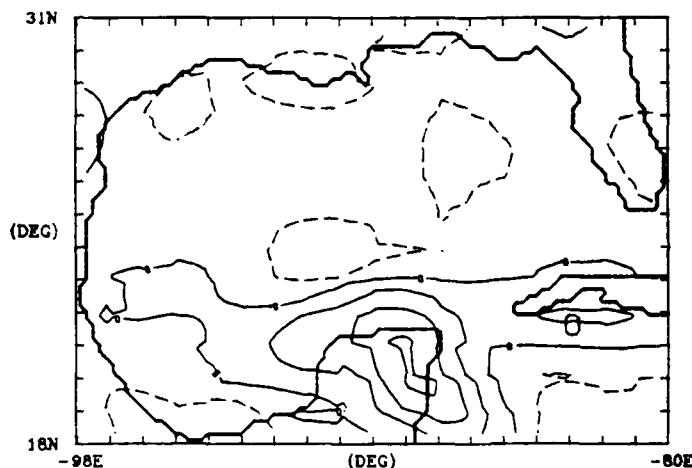


MAXIMUM WIND STRESS = 1.35 DYNES/CM²

NOIDA 777 13-DEC-84

WIND STRESS CURL

013/1976 AT 0 GMT DC = 2.0E-07 M



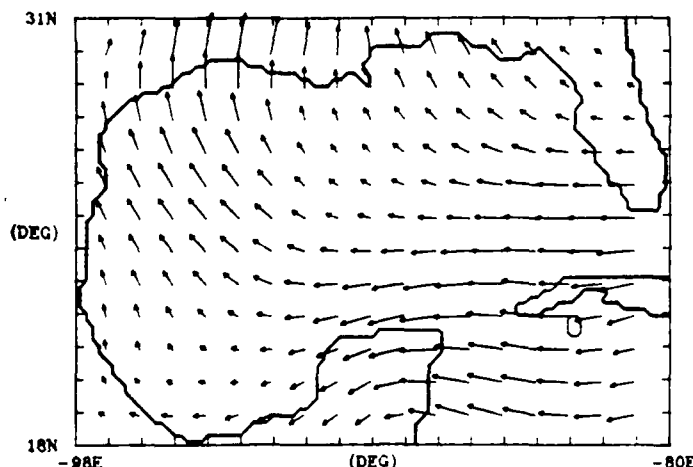
MIN = -7.27E-07 MAX = 6.47E-07

NOIDA 777 13-DEC-84

WIND STRESS

013/1976 AT 12 GMT

1.0

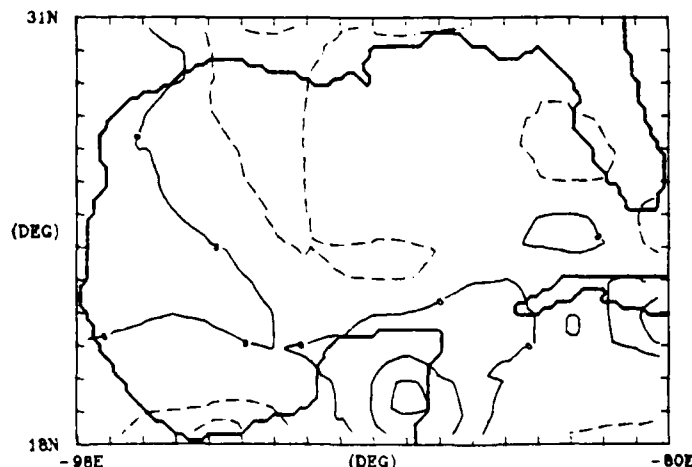


MAXIMUM WIND STRESS = 1.05 DYNES/CM²

NOIDA 777 13-DEC-84

WIND STRESS CURL

013/1976 AT 12 GMT DC = 2.0E-07 M



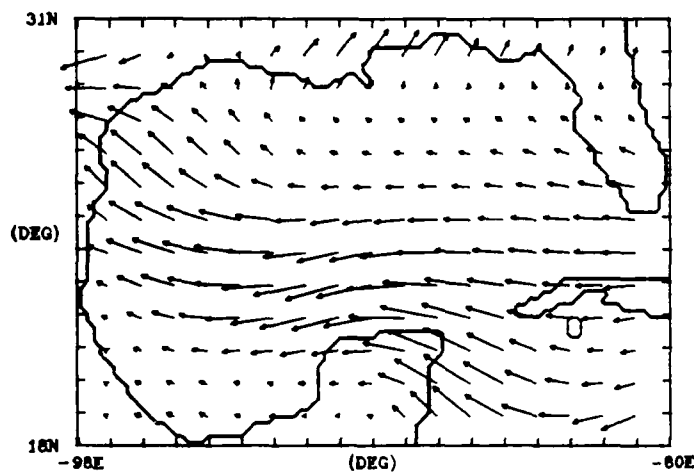
MIN = -4.81E-07 MAX = 4.56E-07

NOIDA 777 13-DEC-84

WIND STRESS

014/1976 AT 0 GMT

10

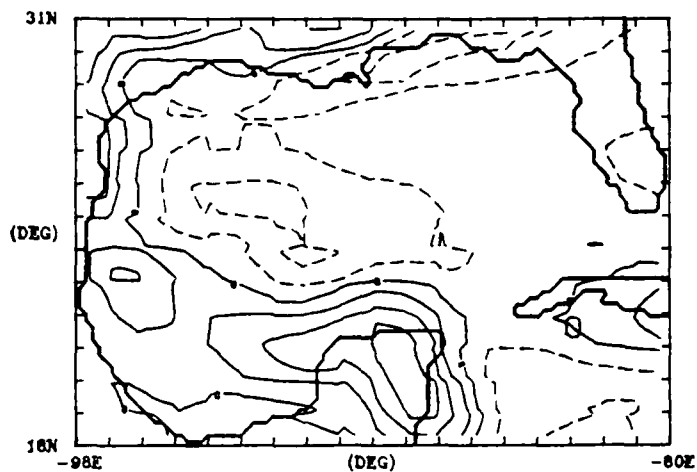


MAXIMUM WIND STRESS = 140 DYNES/CM²

NORDA 777 19-DEC-84

WIND STRESS CURL

014/1976 AT 0 GMT DC = 2.0E-07 M



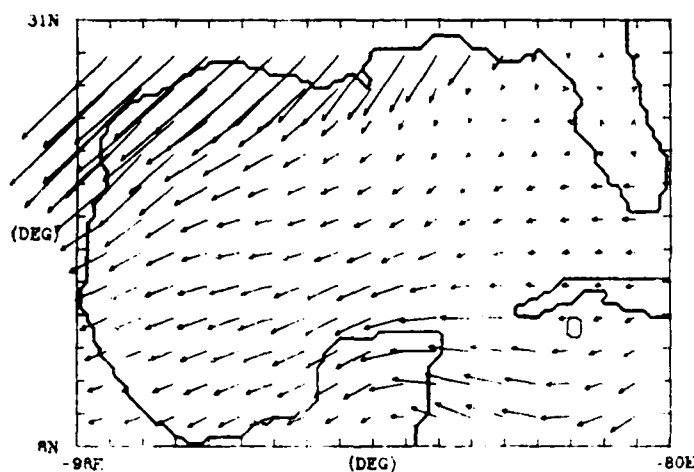
MIN = -5.22E-07 MAX = 7.65E-07

NORDA 777 19-DEC-84

WIND STRESS

014/1976 AT 12 GMT

10

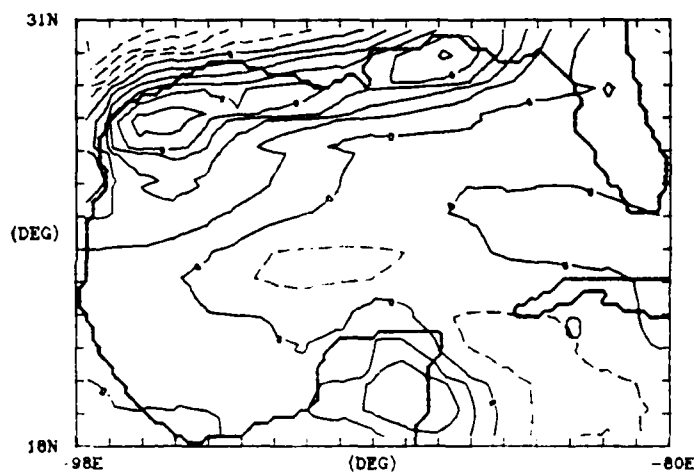


MAXIMUM WIND STRESS = 332 DYNES/CM²

NORDA 777 19-DEC-84

WIND STRESS CURL

014/1976 AT 12 GMT DC = 2.0E-07 M



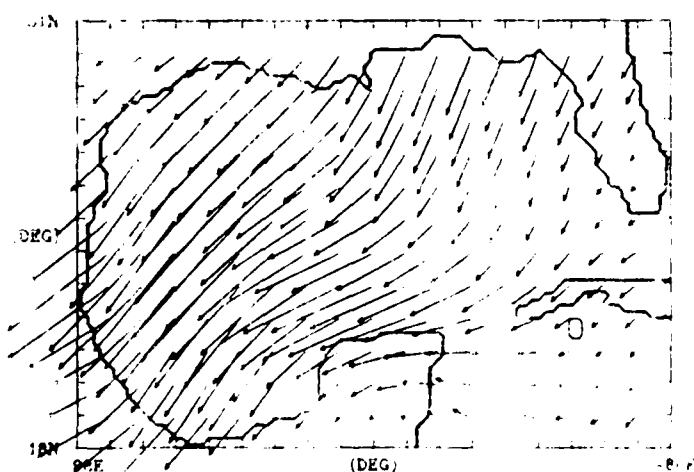
MIN = -1.03E-06 MAX = 1.11E-06

NORDA 777 19-DEC-84

WIND STRESS

015/1976 AT 0 GMT

10

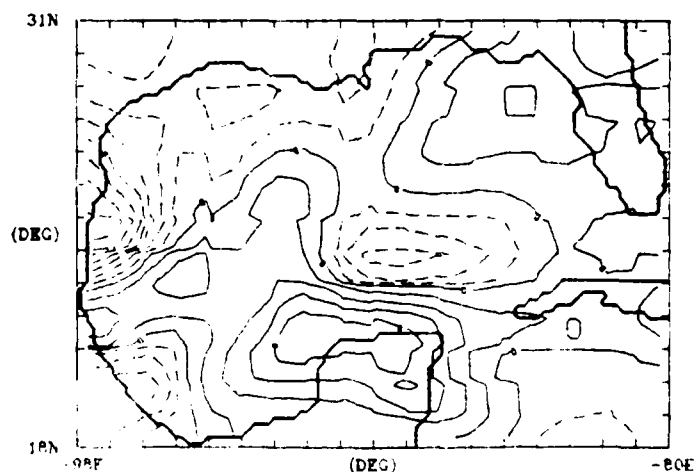


MAXIMUM WIND STRESS = 142 DYNES/CM²

NORDA 777 19-DEC-84

WIND STRESS CURL

015/1976 AT 0 GMT DC = 2.0E-07 M



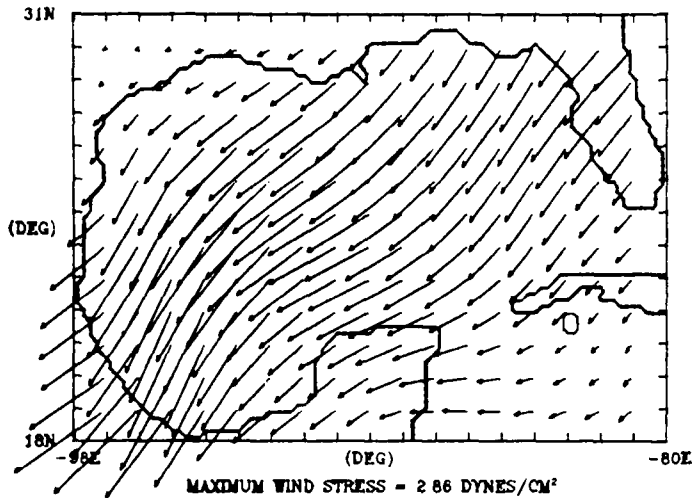
MIN = -1.56E-06 MAX = 9.87E-07

NORDA 777 19-DEC-84

WIND STRESS

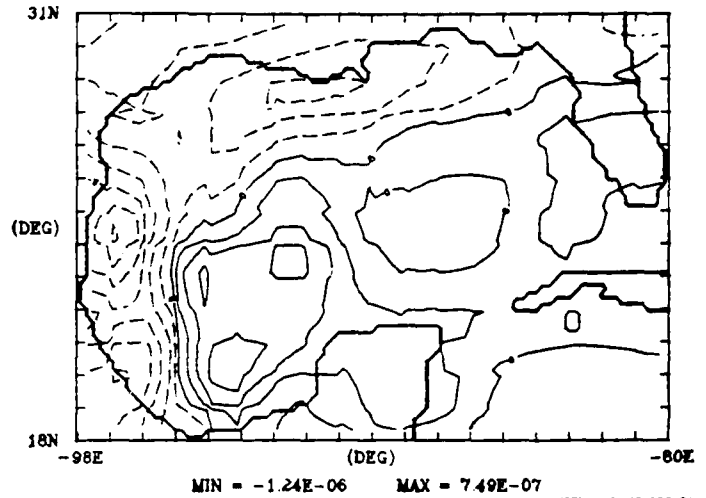
015/1976 AT 12 GMT

16



WIND STRESS CURL

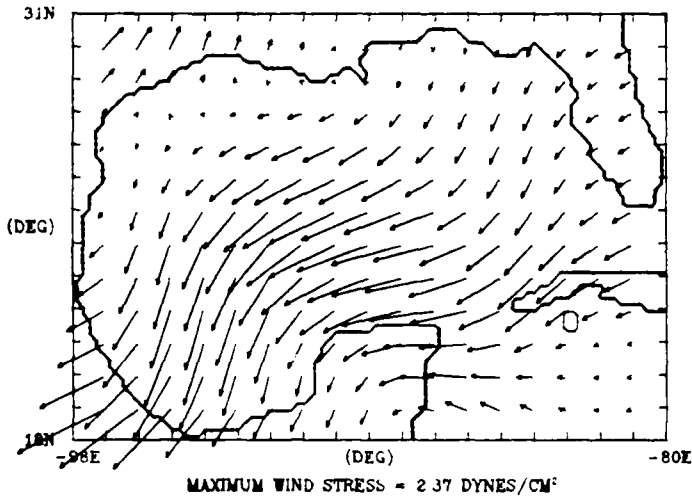
015/1976 AT 12 GMT DC = 2.0E-07 M



WIND STRESS

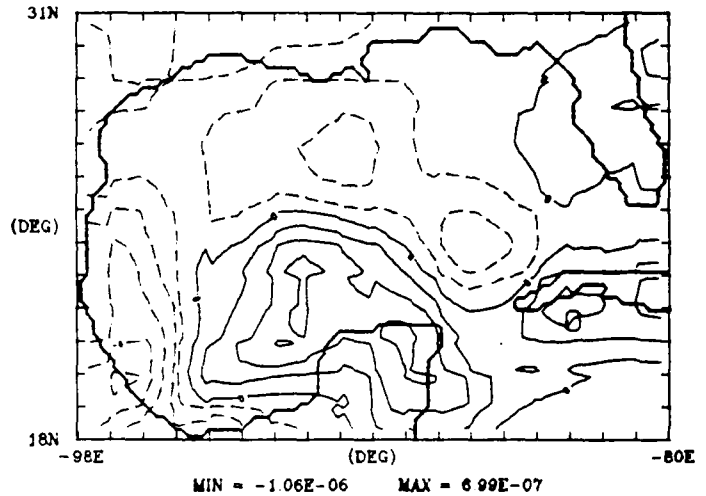
016/1976 AT 0 GMT

16



WIND STRESS CURL

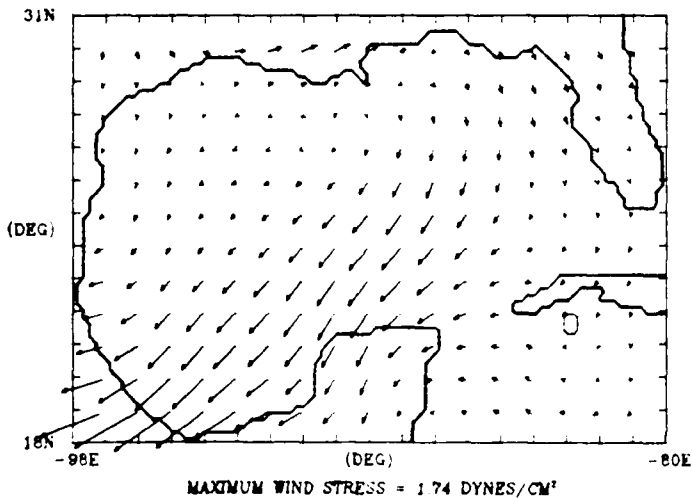
016/1976 AT 0 GMT DC = 2.0E-07 M



WIND STRESS

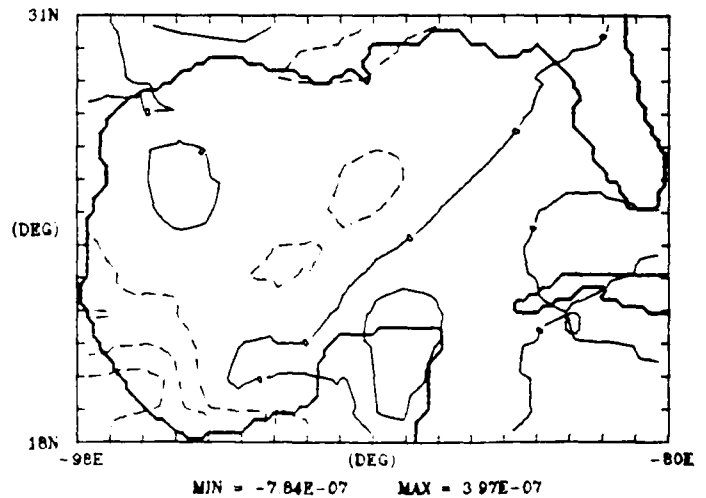
016/1976 AT 12 GMT

16

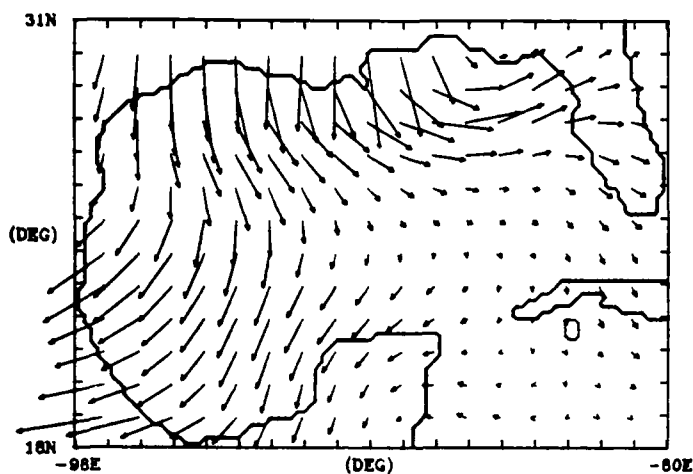


WIND STRESS CURL

016/1976 AT 12 GMT DC = 2.0E-07 M

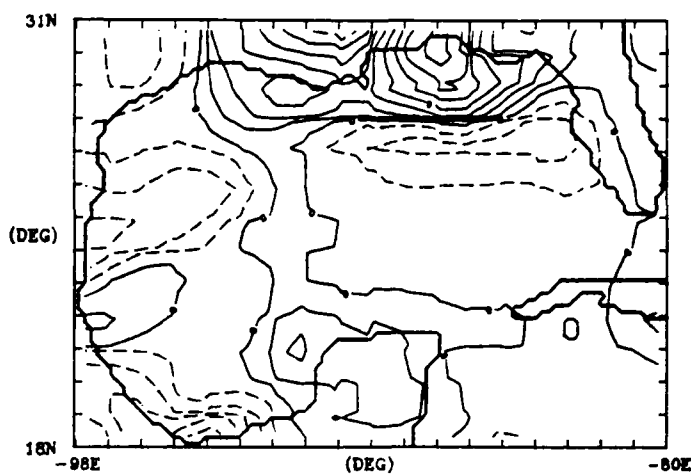


WIND STRESS
017/1976 AT 0 GMT



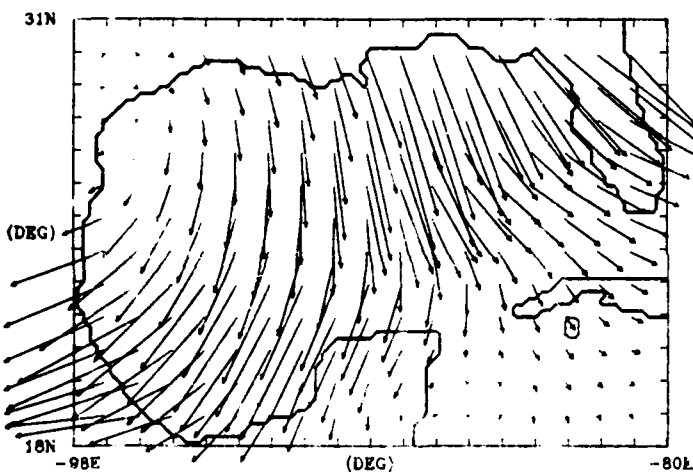
MAXIMUM WIND STRESS = 2.29 DYNES/CM²
NORDA 323 19-DEC-84

WIND STRESS CURL
017/1976 AT 0 GMT DC = 2.0E-07 M



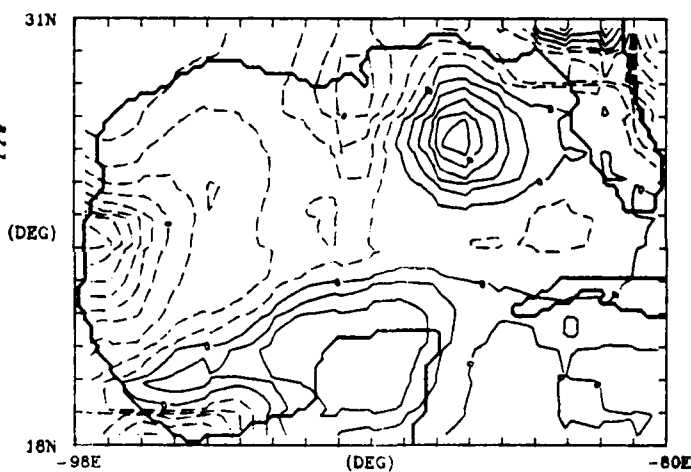
MIN = -1.12E-06 MAX = 1.51E-06
NORDA 323 19-DEC-84

WIND STRESS
017/1976 AT 12 GMT



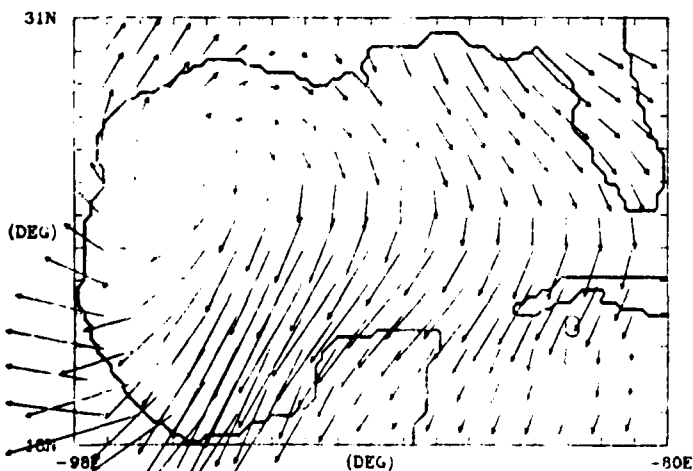
MAXIMUM WIND STRESS = 4.11 DYNES/CM²
NORDA 323 19-DEC-84

WIND STRESS CURL
017/1976 AT 12 GMT DC = 2.0E-07 M



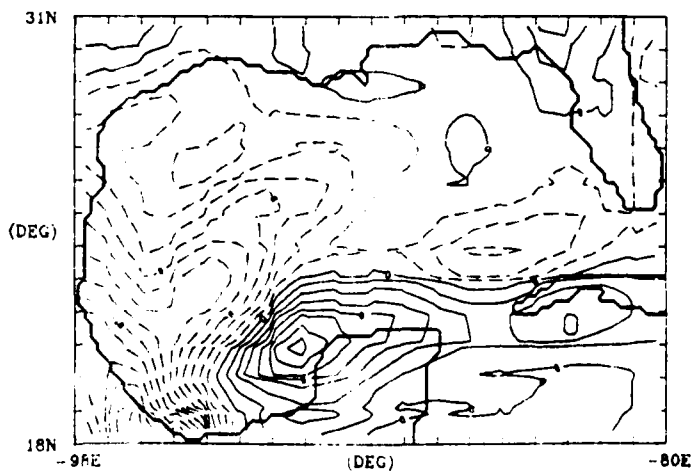
MIN = -1.96E-06 MAX = 1.13E-06
NORDA 323 19-DEC-84

WIND STRESS
018/1976 AT 0 GMT



MAXIMUM WIND STRESS = 3.15 DYNES/CM²
NORDA 323 19-DEC-84

WIND STRESS CURL
018/1976 AT 0 GMT DC = 2.0E-07 M

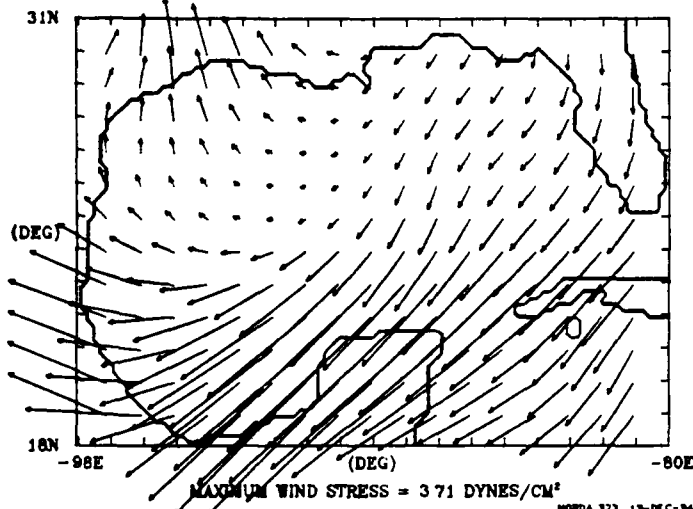


MIN = -2.74E-06 MAX = 1.51E-06
NORDA 323 19-DEC-84

WIND STRESS

018/1976 AT 12 GMT

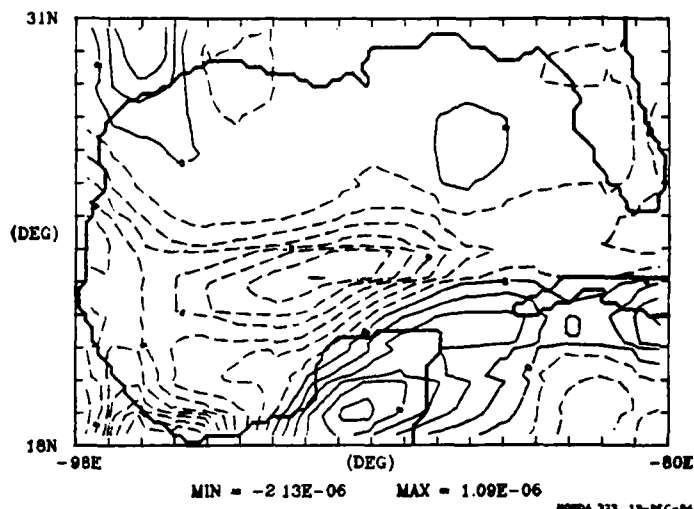
12



NORDA 323 13-DEC-84

WIND STRESS CURL

018/1976 AT 12 GMT DC = 2.0E-07 M

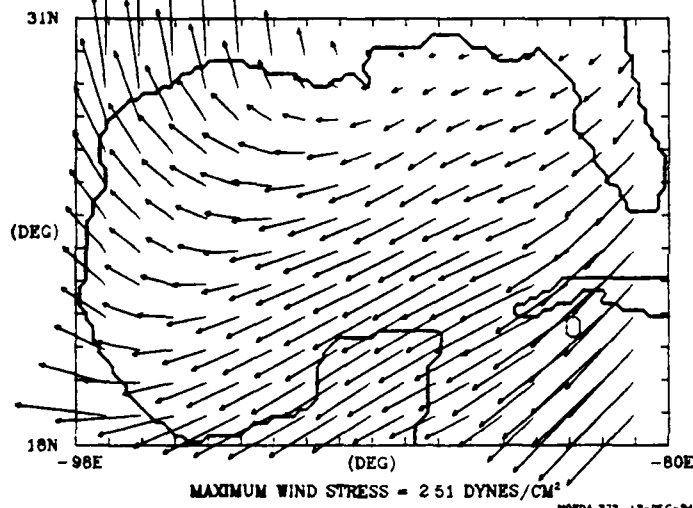


NORDA 323 13-DEC-84

WIND STRESS

019/1976 AT 0 GMT

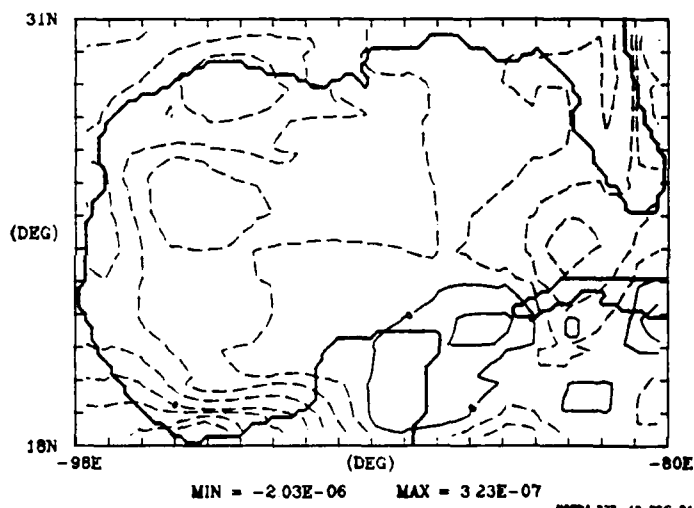
13



NORDA 323 13-DEC-84

WIND STRESS CURL

019/1976 AT 0 GMT DC = 2.0E-07 M

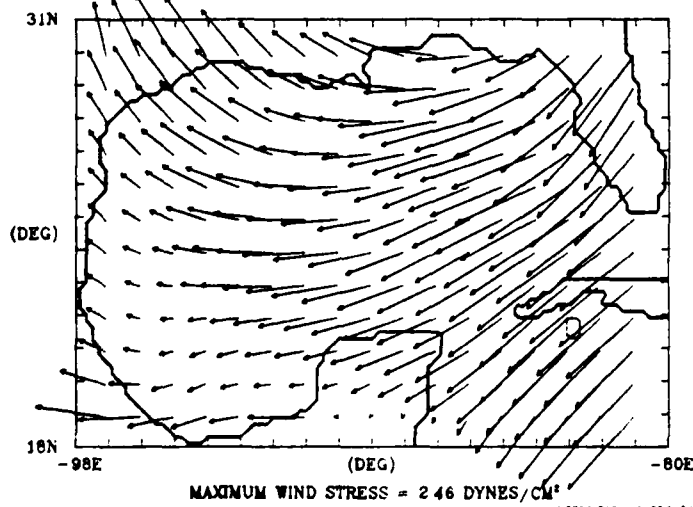


NORDA 323 13-DEC-84

WIND STRESS

019/1976 AT 12 GMT

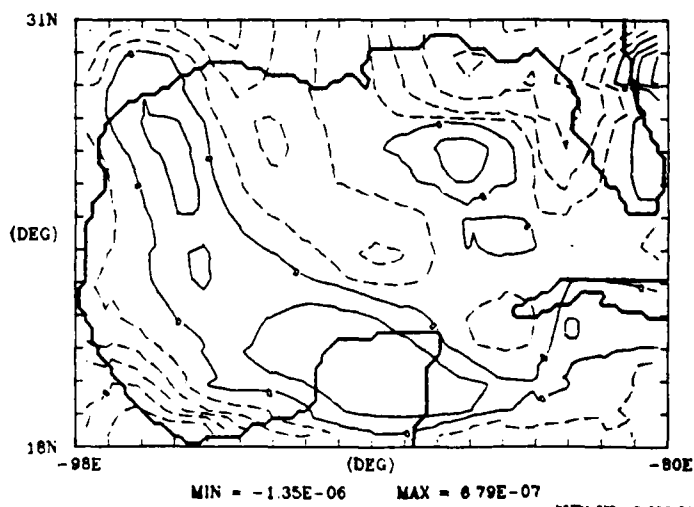
14



NORDA 323 13-DEC-84

WIND STRESS CURL

019/1976 AT 12 GMT DC = 2.0E-07 M

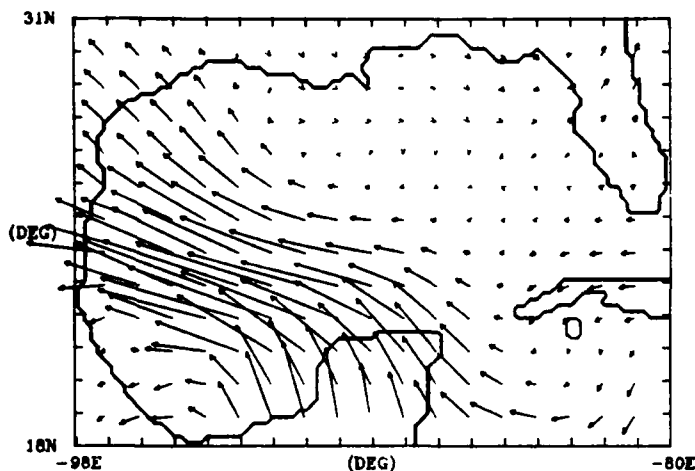


NORDA 323 13-DEC-84

WIND STRESS

193/1976 AT 0 GMT

14

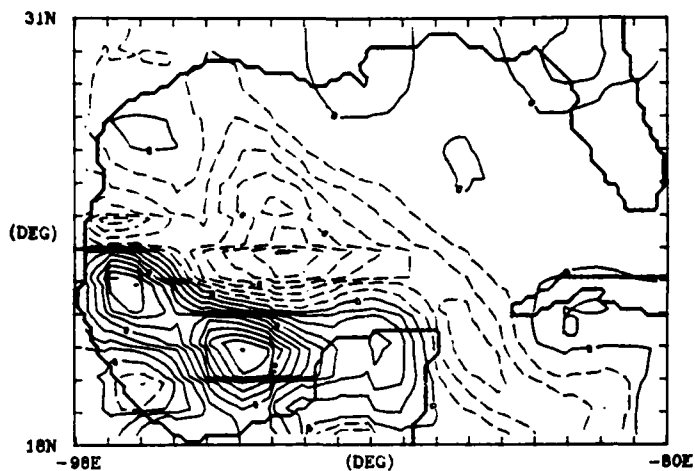


MAXIMUM WIND STRESS = 3.70 DYNES/CM²

NORCA 373 19-DEC-84

WIND STRESS CURL

193/1976 AT 0 GMT DC = 2.0E-07 M



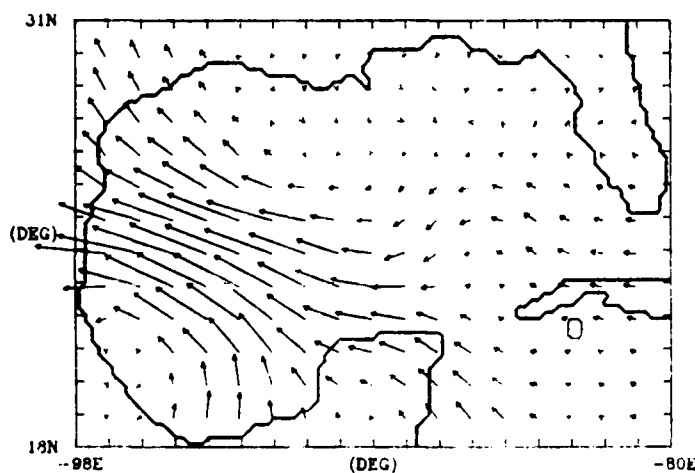
MIN = -1.42E-06 MAX = 2.21E-06

NORCA 373 19-DEC-84

WIND STRESS

193/1976 AT 12 GMT

14

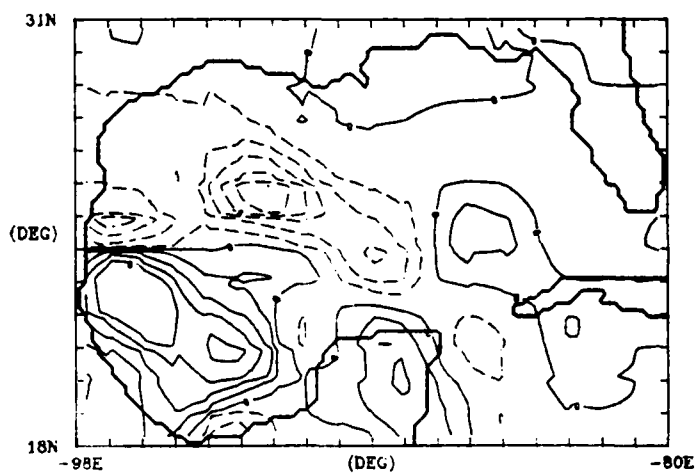


MAXIMUM WIND STRESS = 2.04 DYNES/CM²

NORCA 373 19-DEC-84

WIND STRESS CURL

193/1976 AT 12 GMT DC = 2.0E-07 M



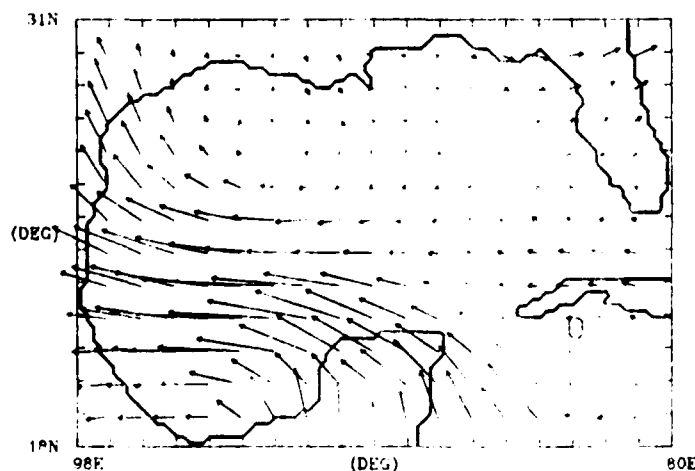
MIN = -1.20E-06 MAX = 1.31E-06

NORCA 373 19-DEC-84

WIND STRESS

194/1976 AT 0 GMT

13

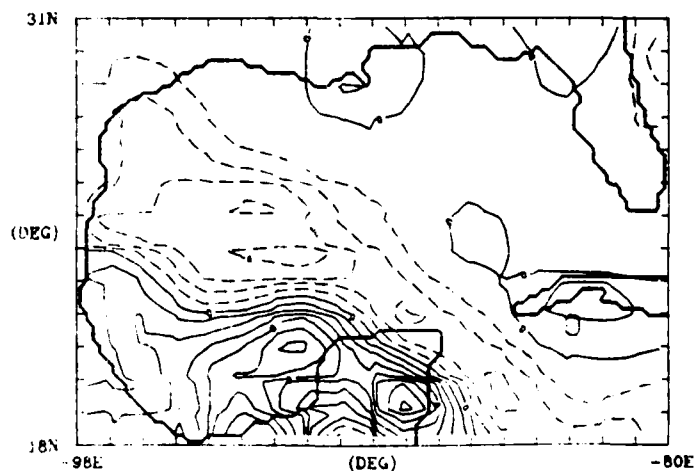


MAXIMUM WIND STRESS = 2.56 DYNES/CM²

NORCA 373 19-DEC-84

WIND STRESS CURL

194/1976 AT 0 GMT DC = 2.0E-07 M



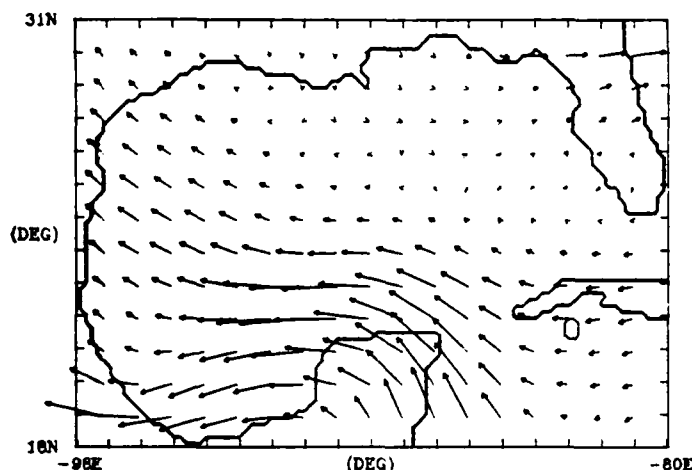
MIN = -9.62E-07 MAX = 1.53E-06

NORCA 373 19-DEC-84

WIND STRESS

194/1976 AT 12 GMT

10



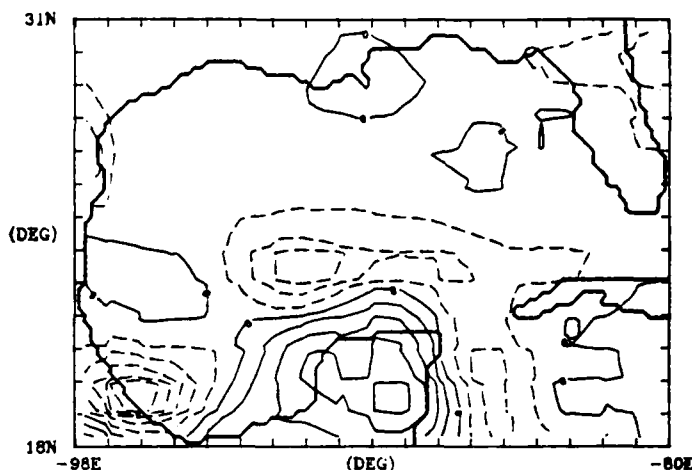
MAXIMUM WIND STRESS = 1.56 DYNES/CM²

NORDA 327 19-DEC-84

WIND STRESS CURL

194/1976 AT 12 GMT

DC = 2.0E-07 M



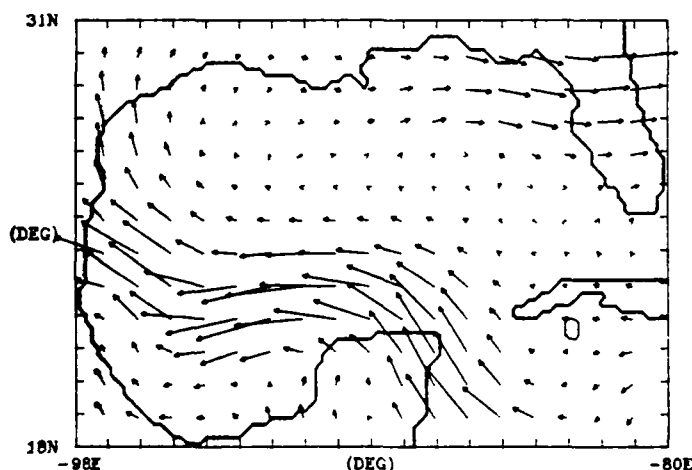
MIN = -1.27E-06 MAX = 6.44E-07

NORDA 327 19-DEC-84

WIND STRESS

195/1976 AT 0 GMT

10



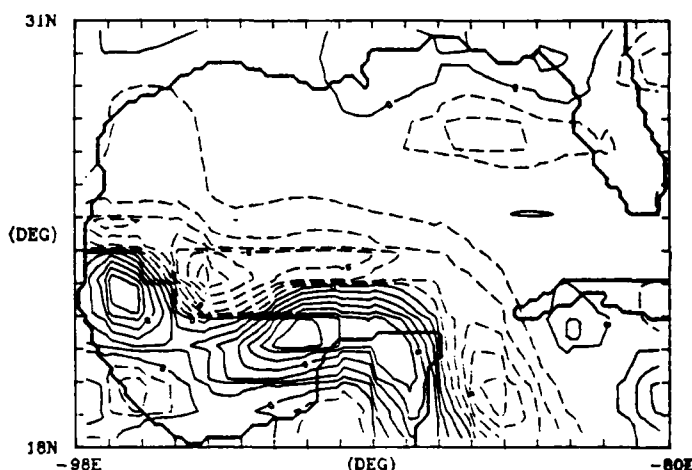
MAXIMUM WIND STRESS = 1.89 DYNES/CM²

NORDA 327 19-DEC-84

WIND STRESS CURL

195/1976 AT 0 GMT

DC = 2.0E-07 M



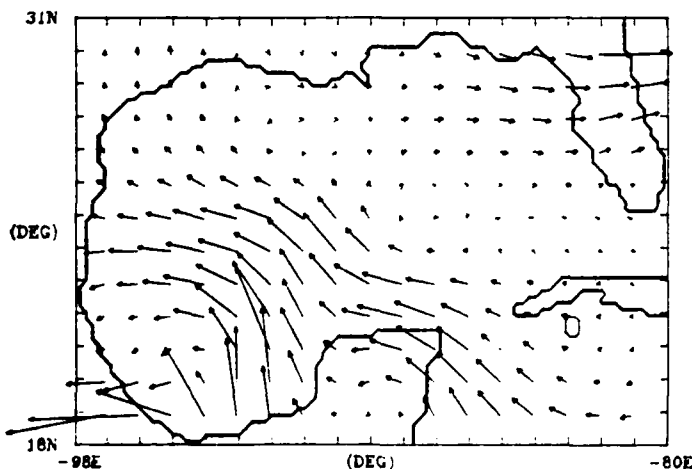
MIN = -1.57E-06 MAX = 1.58E-06

NORDA 327 19-DEC-84

WIND STRESS

195/1976 AT 12 GMT

10



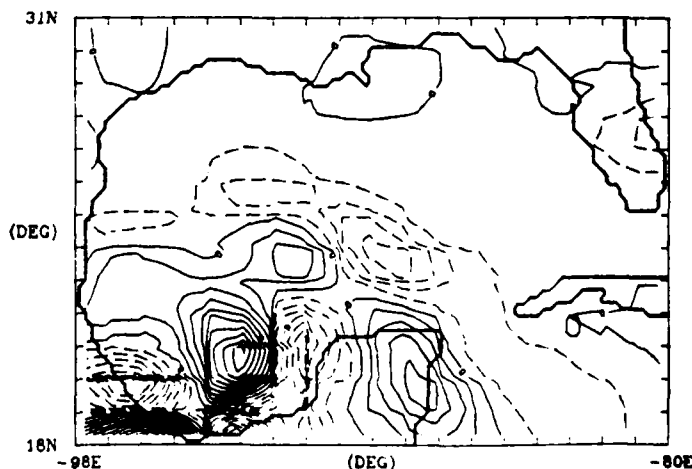
MAXIMUM WIND STRESS = 2.71 DYNES/CM²

NORDA 327 19-DEC-84

WIND STRESS CURL

195/1976 AT 12 GMT

DC = 2.0E-07 M



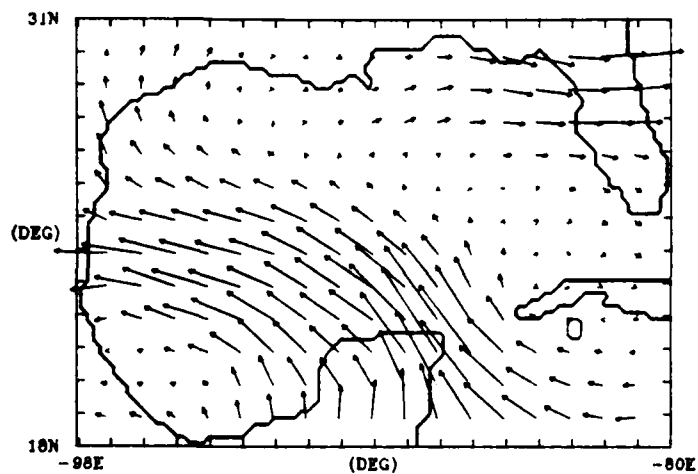
MIN = -3.02E-06 MAX = 2.10E-06

NORDA 327 19-DEC-84

WIND STRESS

196/1976 AT 0 GMT

15

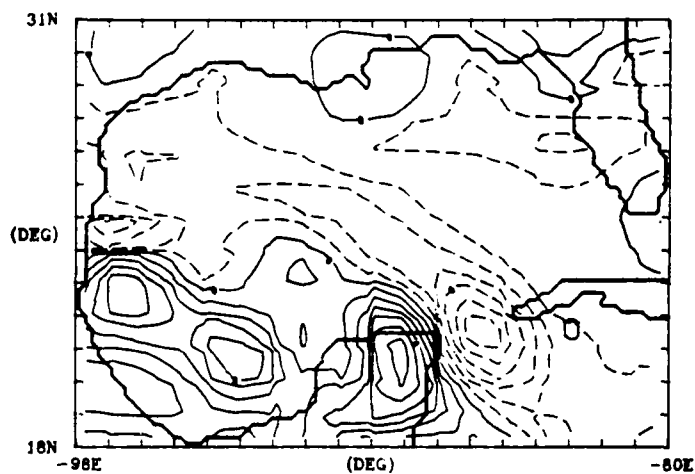


MAXIMUM WIND STRESS = 2.51 DYNES/CM²

NORDA 327 19-DEC-84

WIND STRESS CURL

196/1976 AT 0 GMT DC = 2.0E-07 M



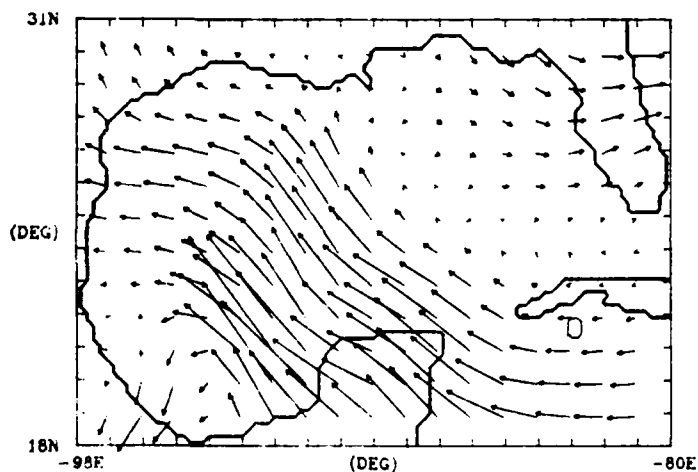
MIN = -1.25E-06 MAX = 1.30E-06

NORDA 327 19-DEC-84

WIND STRESS

196/1976 AT 12 GMT

15

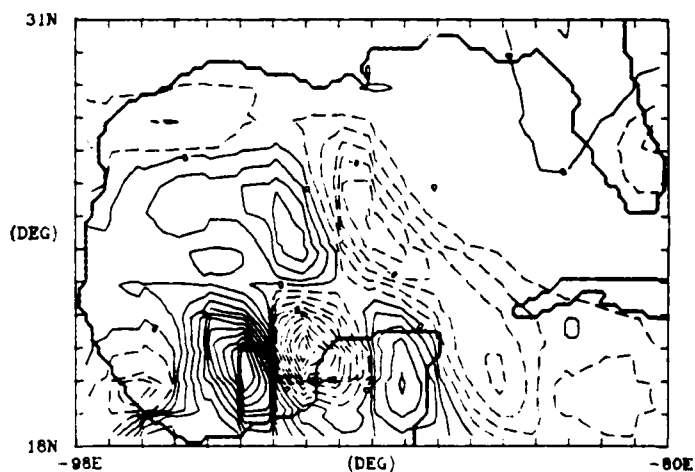


MAXIMUM WIND STRESS = 3.46 DYNES/CM²

NORDA 327 19-DEC-84

WIND STRESS CURL

196/1976 AT 12 GMT DC = 2.0E-07 M



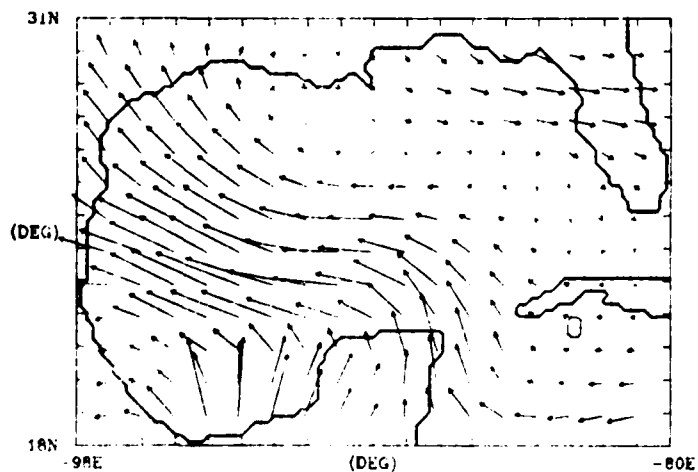
MIN = -2.27E-06 MAX = 2.77E-06

NORDA 327 19-DEC-84

WIND STRESS

197/1976 AT 0 GMT

15

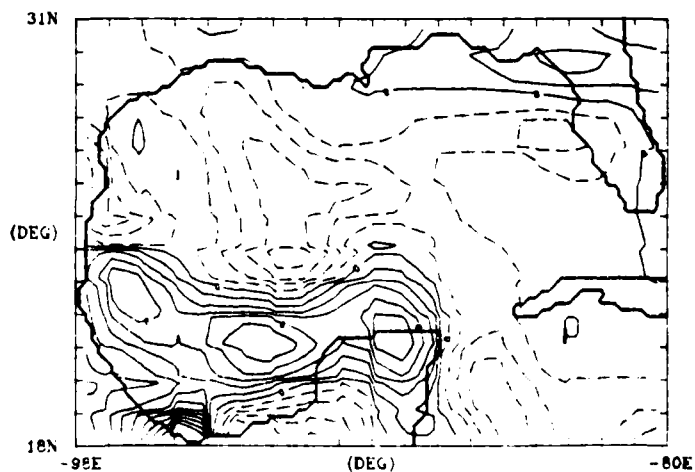


MAXIMUM WIND STRESS = 2.23 DYNES/CM²

NORDA 327 19-DEC-84

WIND STRESS CURL

197/1976 AT 0 GMT DC = 2.0E-07 M



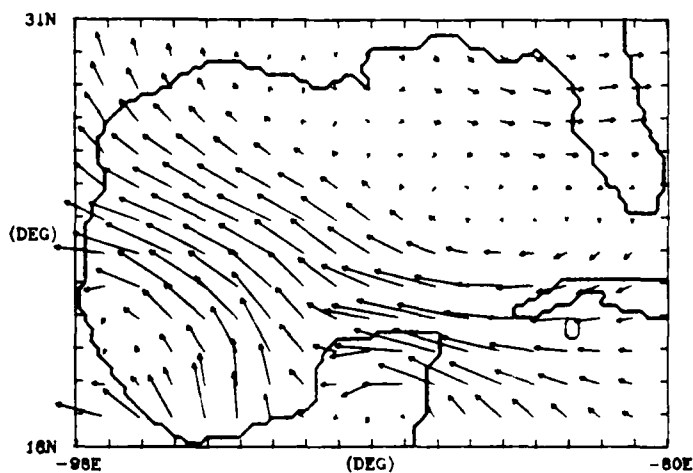
MIN = -1.37E-06 MAX = 2.53E-06

NORDA 327 19-DEC-84

WIND STRESS

197/1976 AT 12 GMT

12



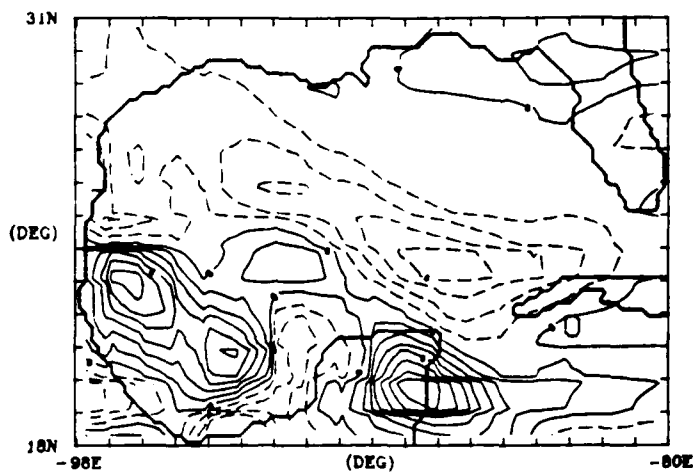
MAXIMUM WIND STRESS = 2.04 DYNES/CM²

NORDA 373 19-DEC-84

WIND STRESS CURL

197/1976 AT 12 GMT

DC = 2.0E-07 M



MIN = -1.49E-06

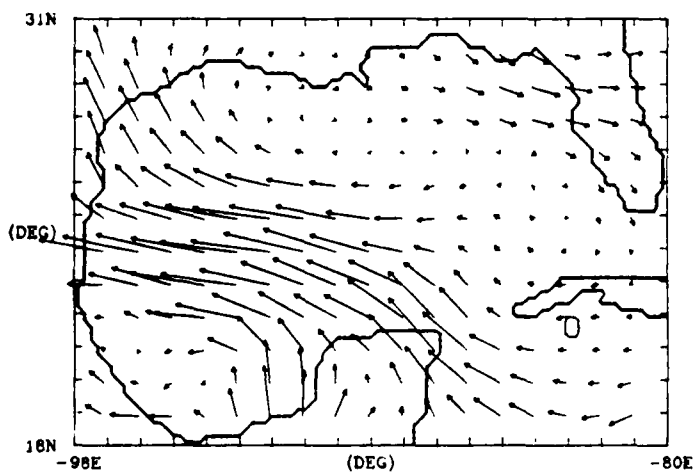
MAX = 1.60E-06

NORDA 373 19-DEC-84

WIND STRESS

198/1976 AT 0 GMT

12



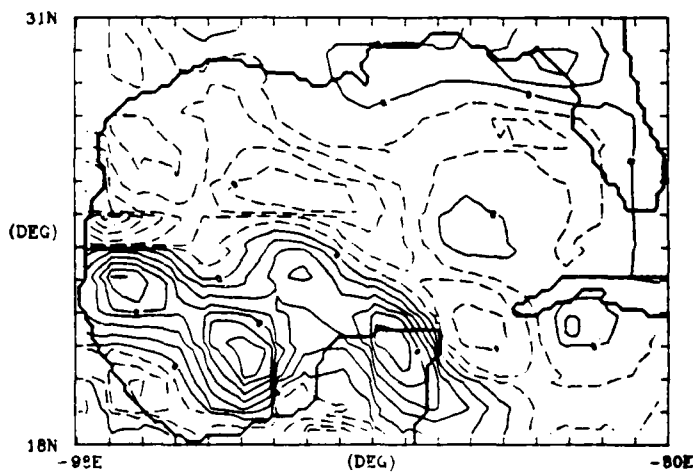
MAXIMUM WIND STRESS = 1.99 DYNES/CM²

NORDA 373 19-DEC-84

WIND STRESS CURL

198/1976 AT 0 GMT

DC = 2.0E-07 M



MIN = -1.48E-06

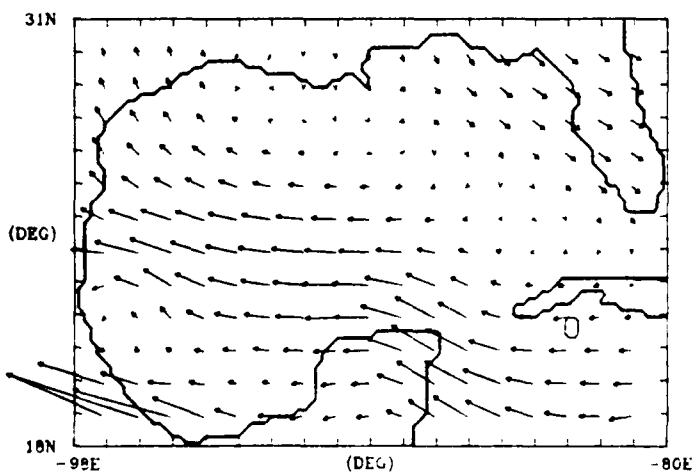
MAX = 1.37E-06

NORDA 373 19-DEC-84

WIND STRESS

198/1976 AT 12 GMT

12



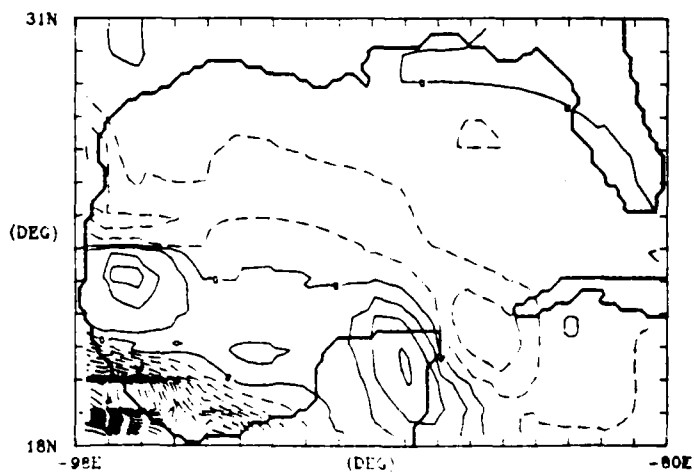
MAXIMUM WIND STRESS = 5.01 DYNES/CM²

NORDA 373 19-DEC-84

WIND STRESS CURL

198/1976 AT 12 GMT

DC = 2.0E-07 M



MIN = -3.40E-06

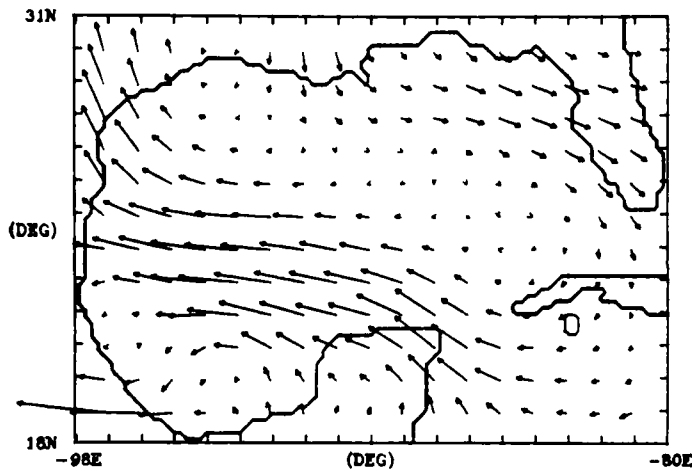
MAX = 1.50E-06

NORDA 373 19-DEC-84

WIND STRESS

199/1976 AT 0 GMT

12

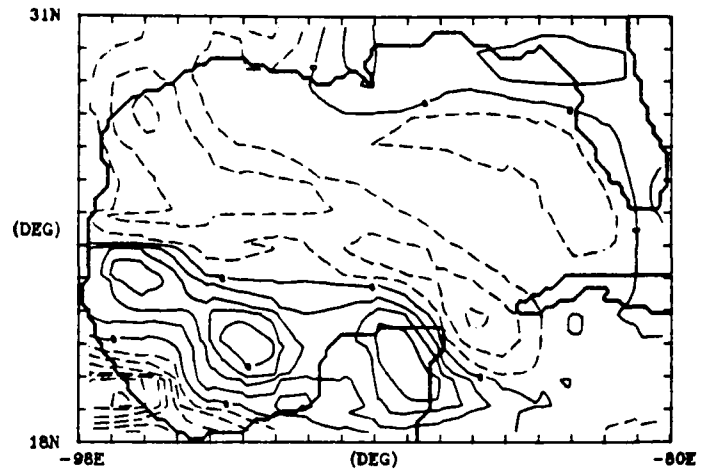


MAXIMUM WIND STRESS = 2.19 DYNES/CM²

NOGDA 323 19-DEC-84

WIND STRESS CURL

199/1976 AT 0 GMT DC = 2.0E-07 M



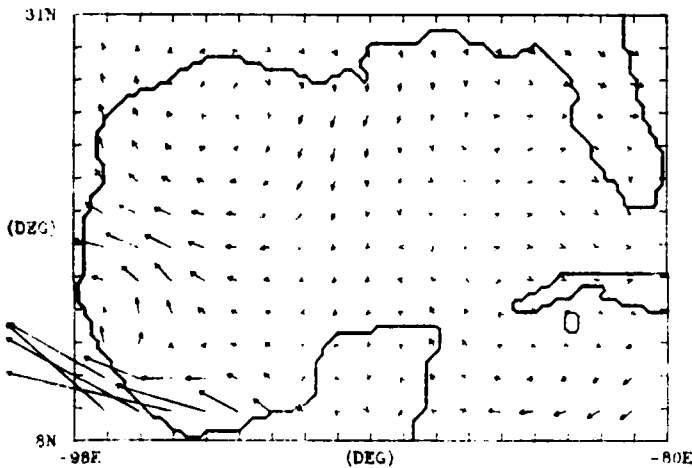
MIN = -1.66E-06 MAX = 9.87E-07

NOGDA 323 19-DEC-84

WIND STRESS

199/1976 AT 12 GMT

12

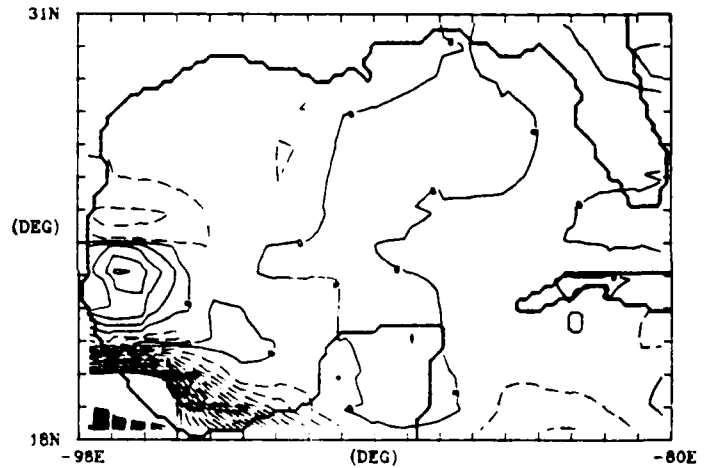


MAXIMUM WIND STRESS = 8.98 DYNES/CM²

NOGDA 323 19-DEC-84

WIND STRESS CURL

199/1976 AT 12 GMT DC = 2.0E-07 M



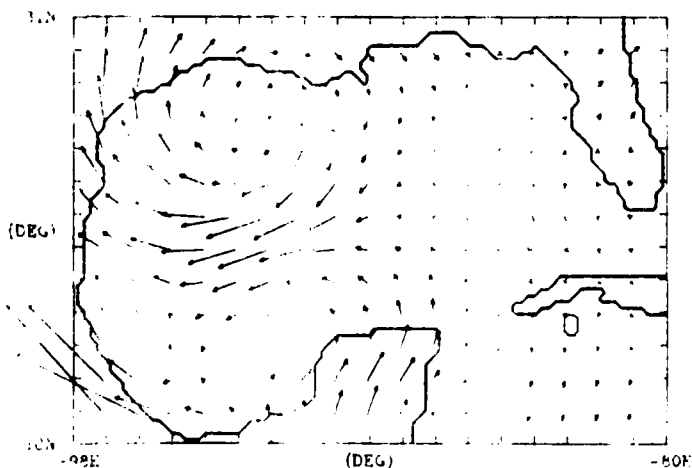
MIN = -6.95E-06 MAX = 8.38E-07

NOGDA 323 19-DEC-84

WIND STRESS

200/1976 AT 0 GMT

15

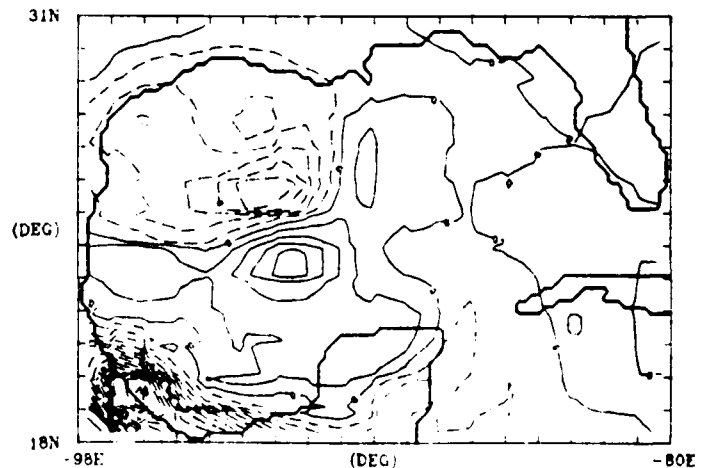


MAXIMUM WIND STRESS = 4.59 DYNES/CM²

NOGDA 323 19-DEC-84

WIND STRESS CURL

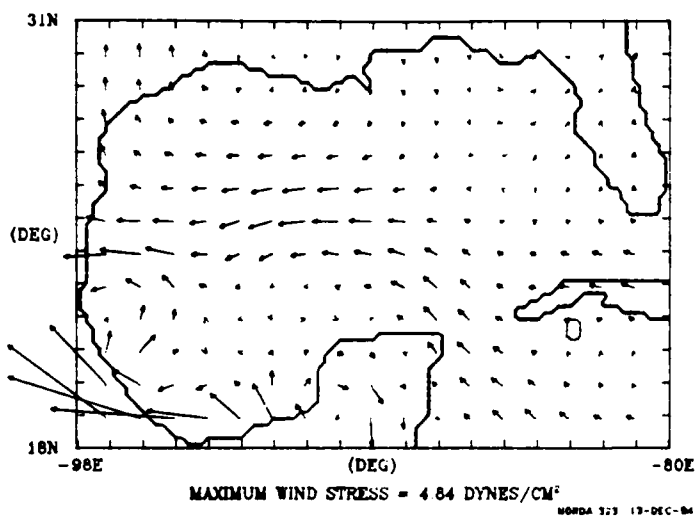
200/1976 AT 0 GMT DC = 2.0E-07 M



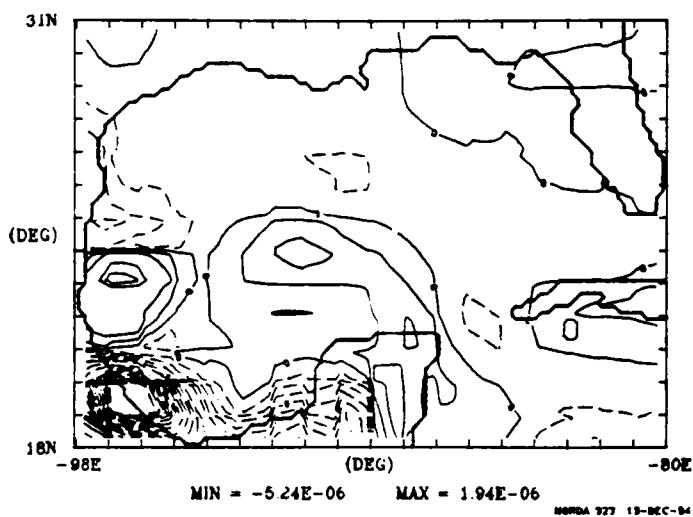
MIN = -3.96E-06 MAX = 1.37E-06

NOGDA 323 19-DEC-84

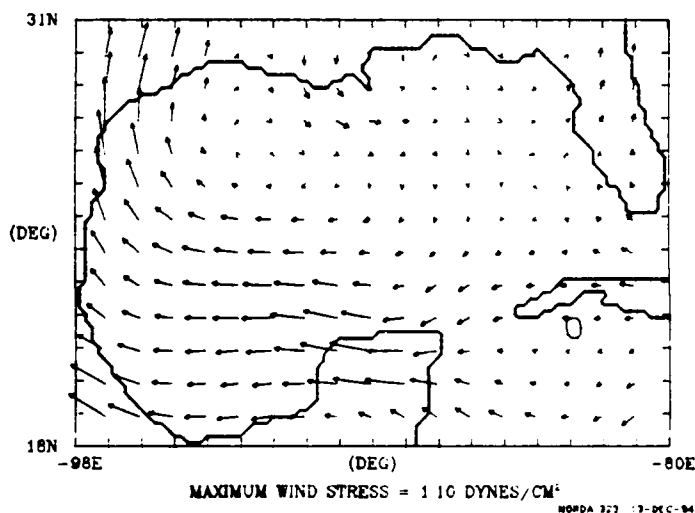
WIND STRESS
200/1976 AT 12 GMT



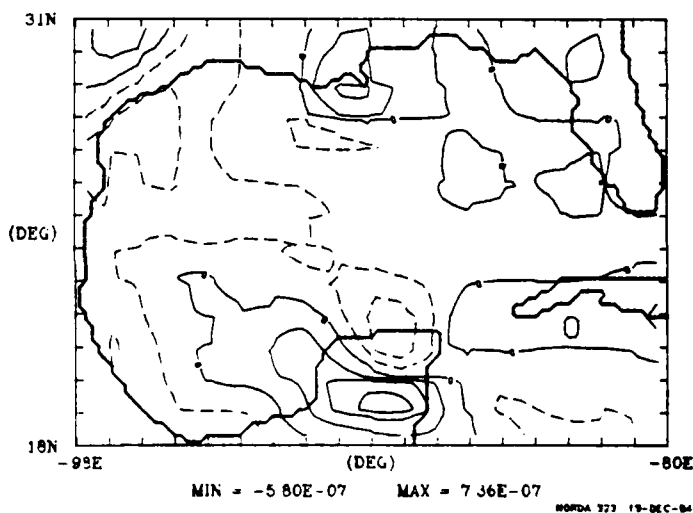
WIND STRESS CURL
200/1976 AT 12 GMT DC = 2.0E-07 M



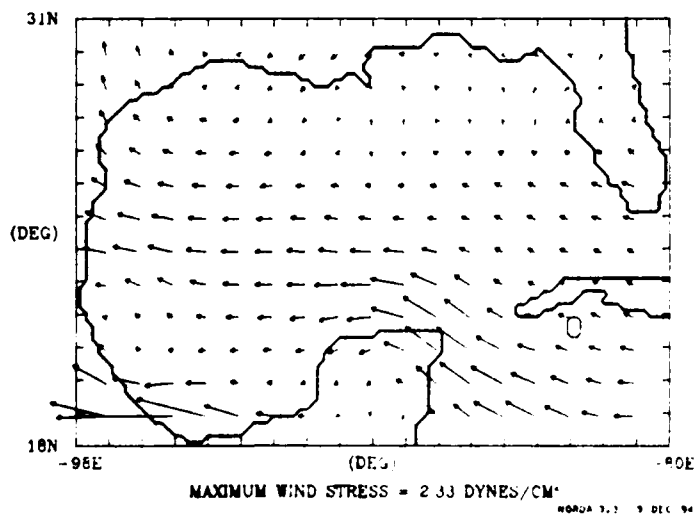
WIND STRESS
201/1976 AT 0 GMT



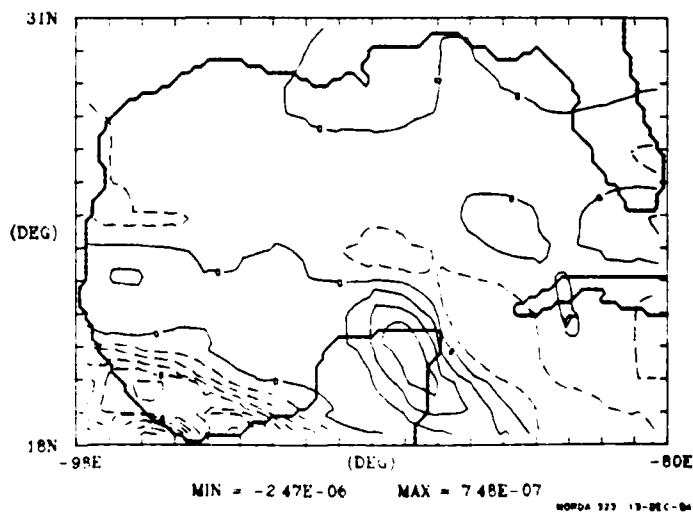
WIND STRESS CURL
201/1976 AT 0 GMT DC = 2.0E-07 M



WIND STRESS
201/1976 AT 12 GMT



WIND STRESS CURL
201/1976 AT 12 GMT DC = 2.0E-07 M

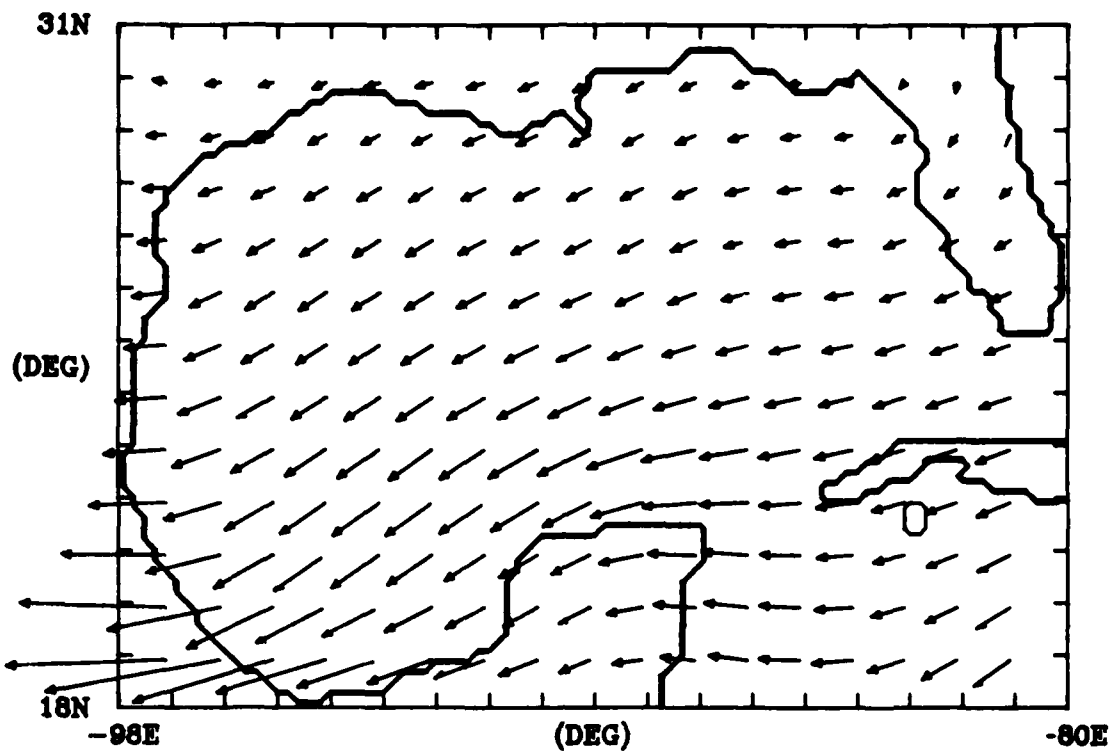


APPENDIX B: SEASONALLY AVERAGED WIND STRESS AND WIND STRESS CURL CLIMATOLOGIES
FOR THE PERIOD 1967-1982

WIND STRESS

WINTER 1967-1982

10

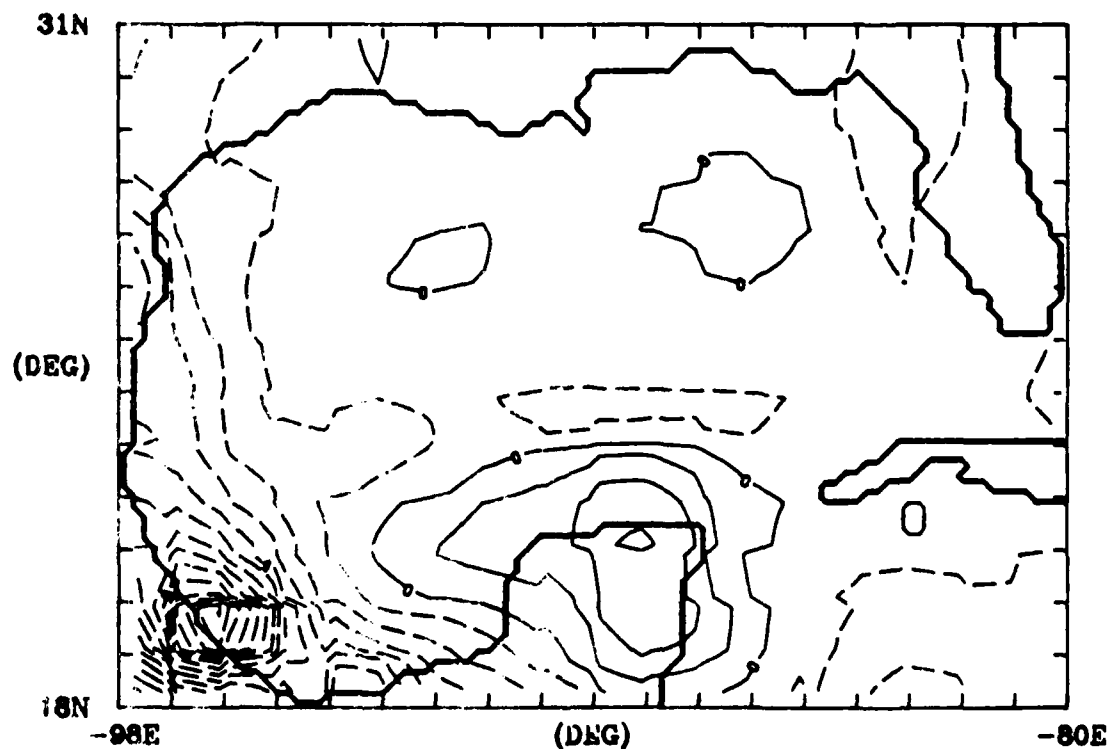


MAXIMUM WIND STRESS = 2.79 DYNES/CM²

1.00DA 127 12-DEC-84

WIND STRESS CURL

WINTER 1967-1982 DC = 1.0E-07 MKS



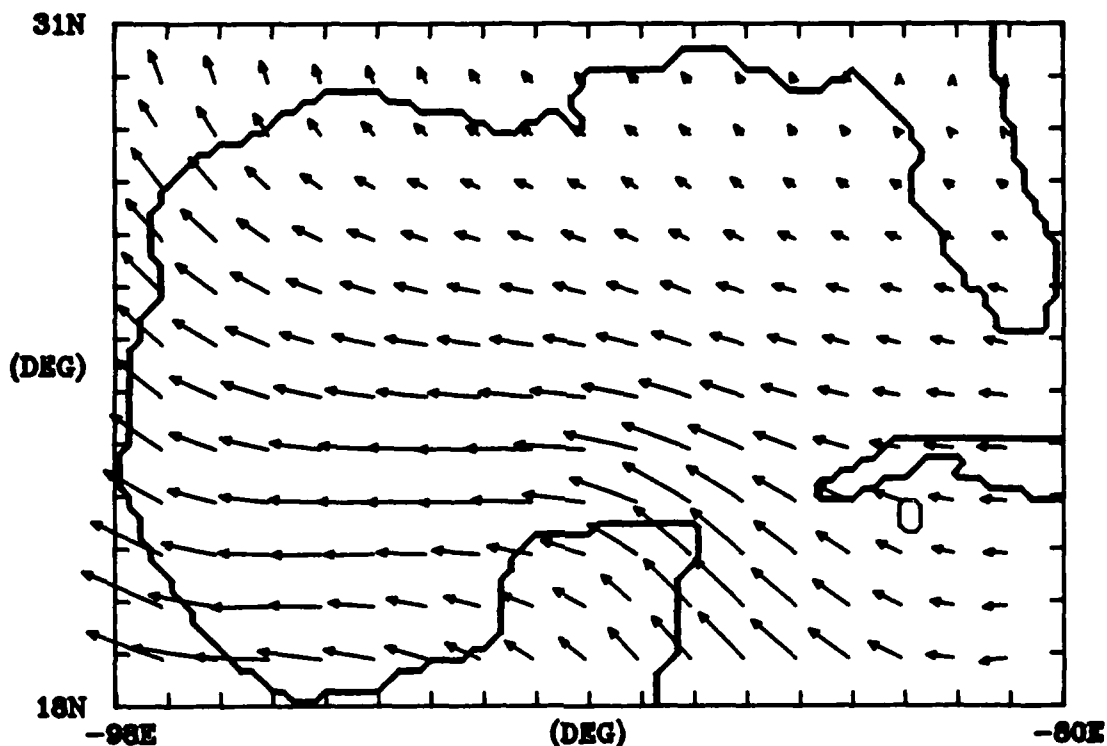
MIN = -1.42E-06 MAX = 3.15E-07

1.00DA 127 12-DEC-84

WIND STRESS

SPRING 1967-1982

10

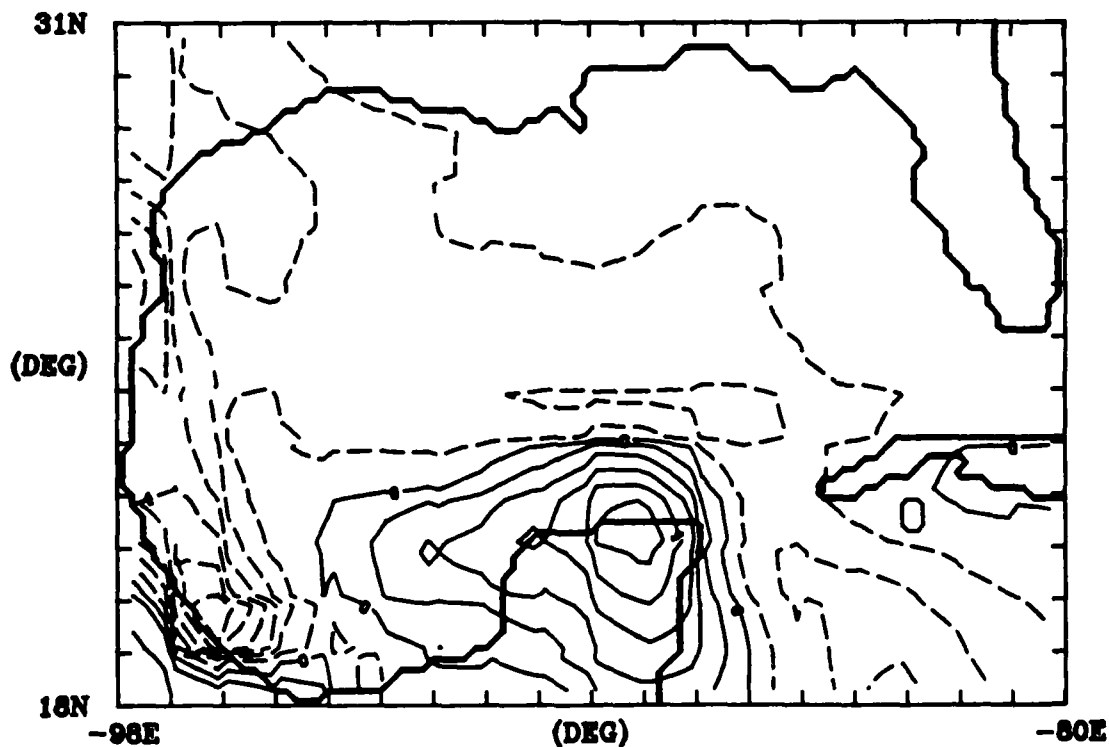


MAXIMUM WIND STRESS = 1.33 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

SPRING 1967-1982 DC = 1.0E-07 MKS



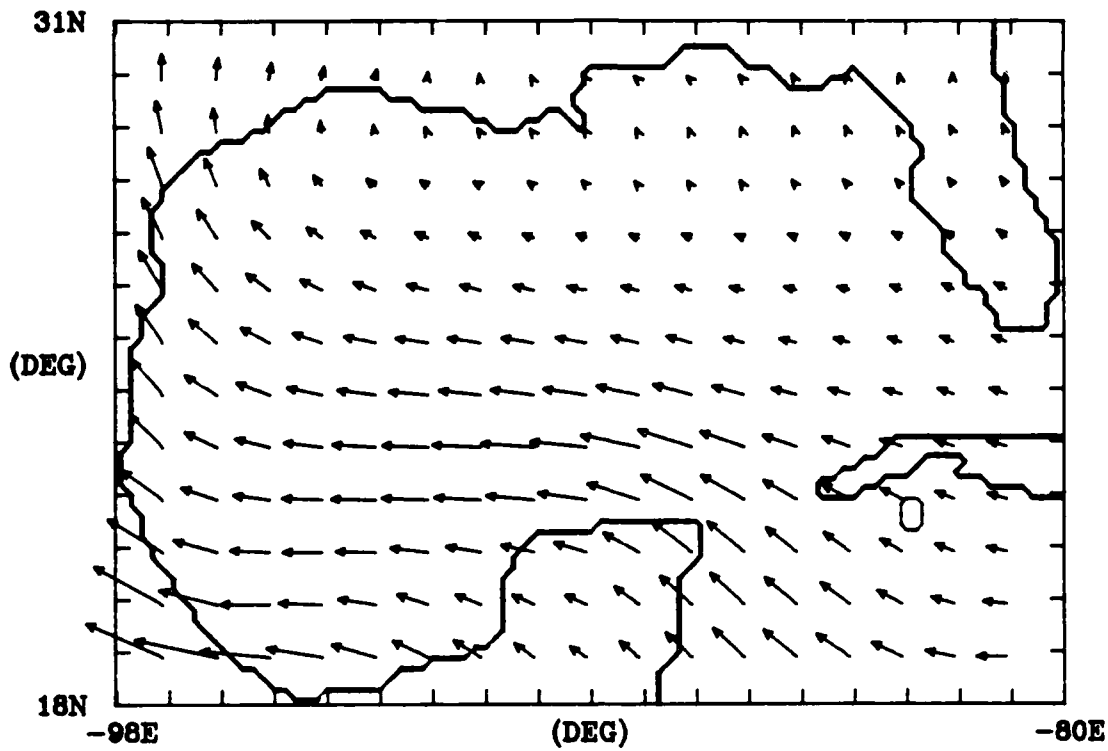
MIN = -7.86E-07 MAX = 5.85E-07

NORDA 323 12-DEC-84

WIND STRESS

SUMMER 1967-1982

1.0

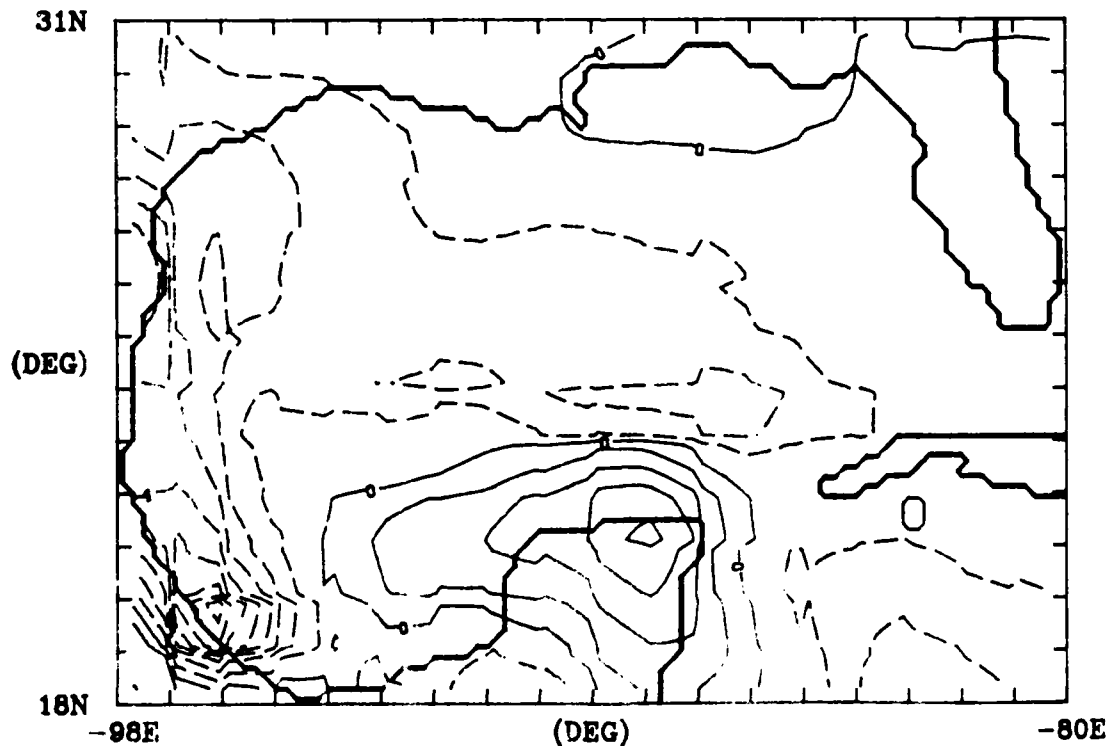


MAXIMUM WIND STRESS = 1.29 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

SUMMER 1967-1982 DC = 1.0E-07 MKS



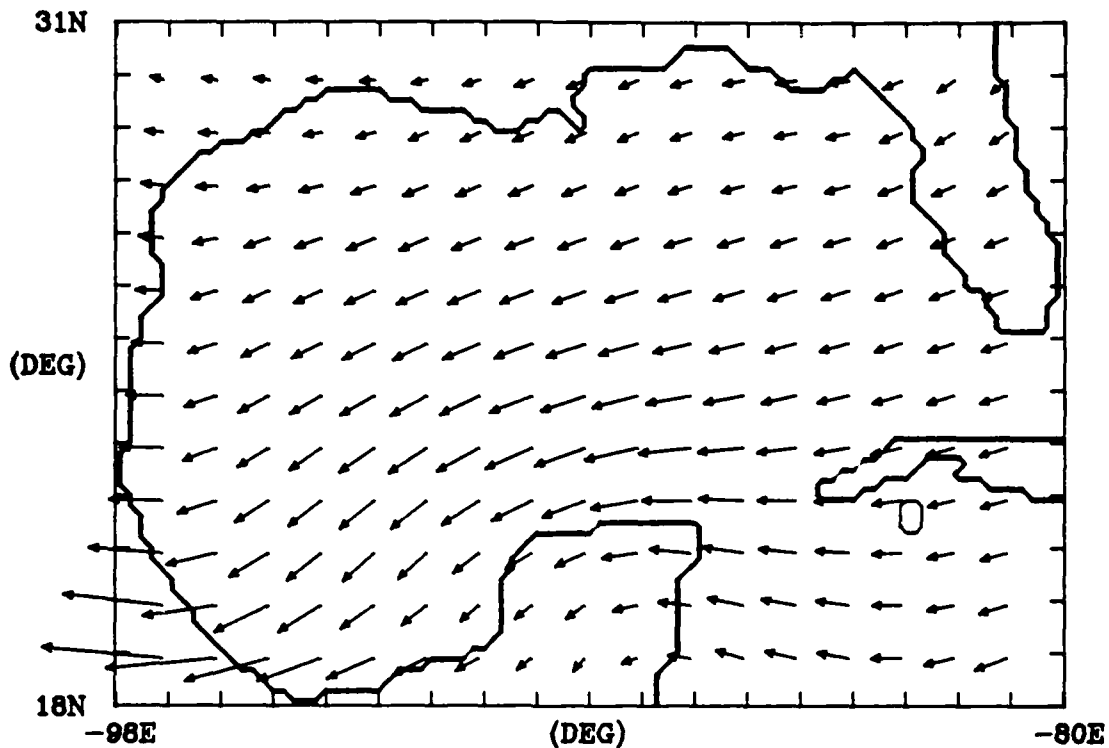
MIN = -8.64E-07 MAX = 4.31E-07

NORDA 323 12-DEC-84

WIND STRESS

FALL 1967-1982

1.0

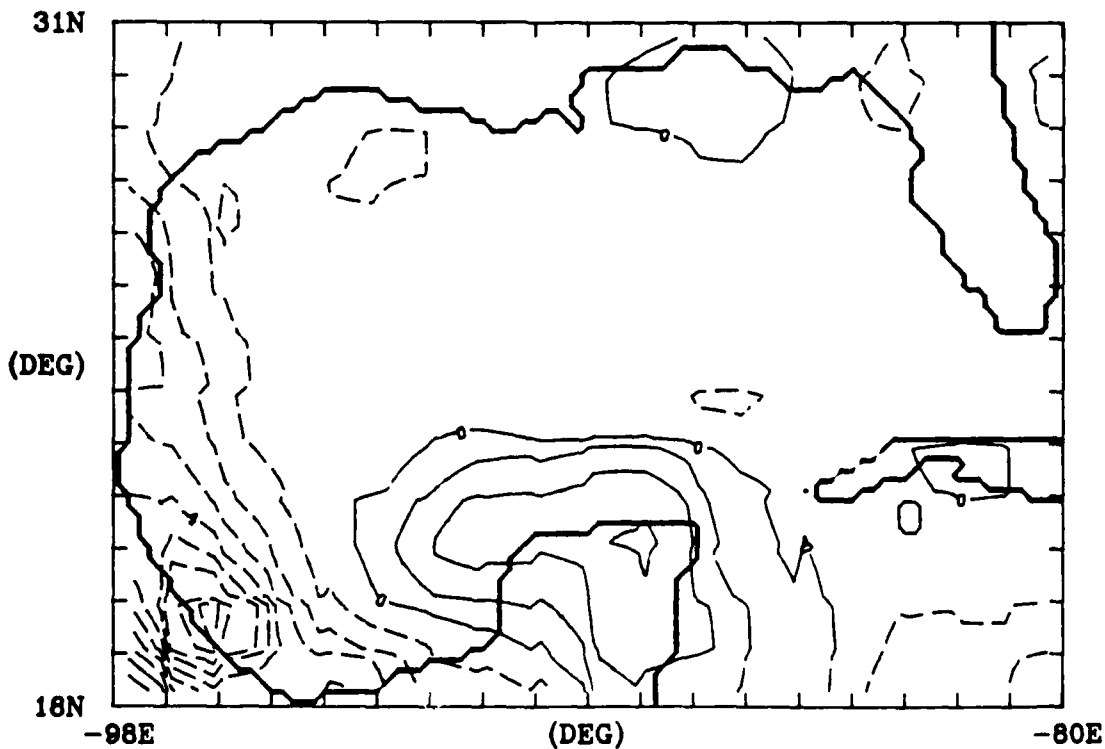


MAXIMUM WIND STRESS = 1.84 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

FALL 1967-1982 DC = 1.0E-07 MKS



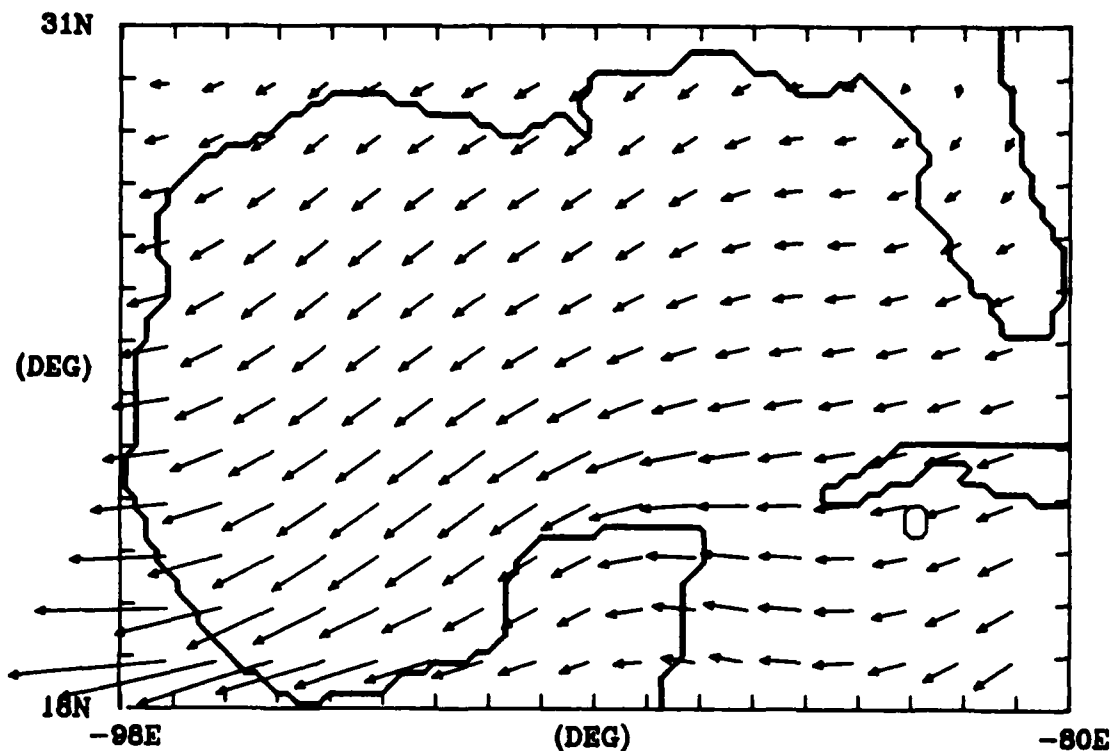
MIN = -9.53E-07 MAX = 3.22E-07

NORDA 323 12-DEC-84

APPENDIX C: MONTHLY AVERAGED WIND STRESS AND WIND STRESS CURL CLIMATOLOGIES
FOR THE PERIOD 1967-1982

WIND STRESS

JANUARY 1967-1982

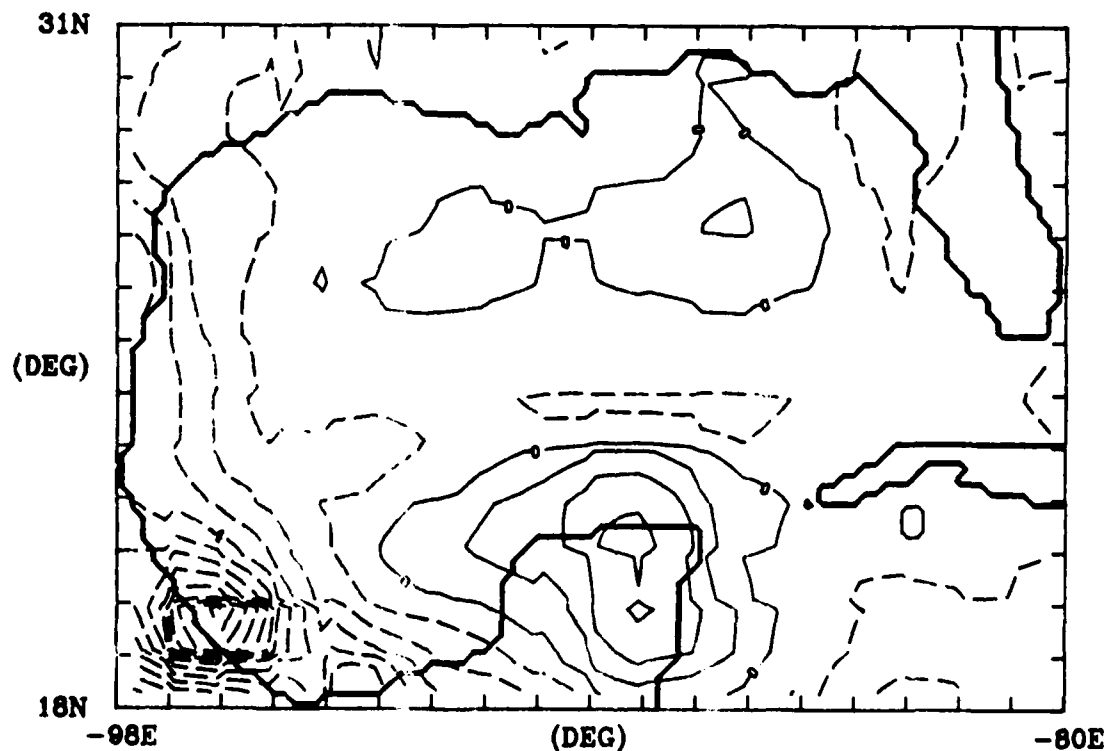


MAXIMUM WIND STRESS = 2.53 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JANUARY 1967-1982 DC = 1.0E-07

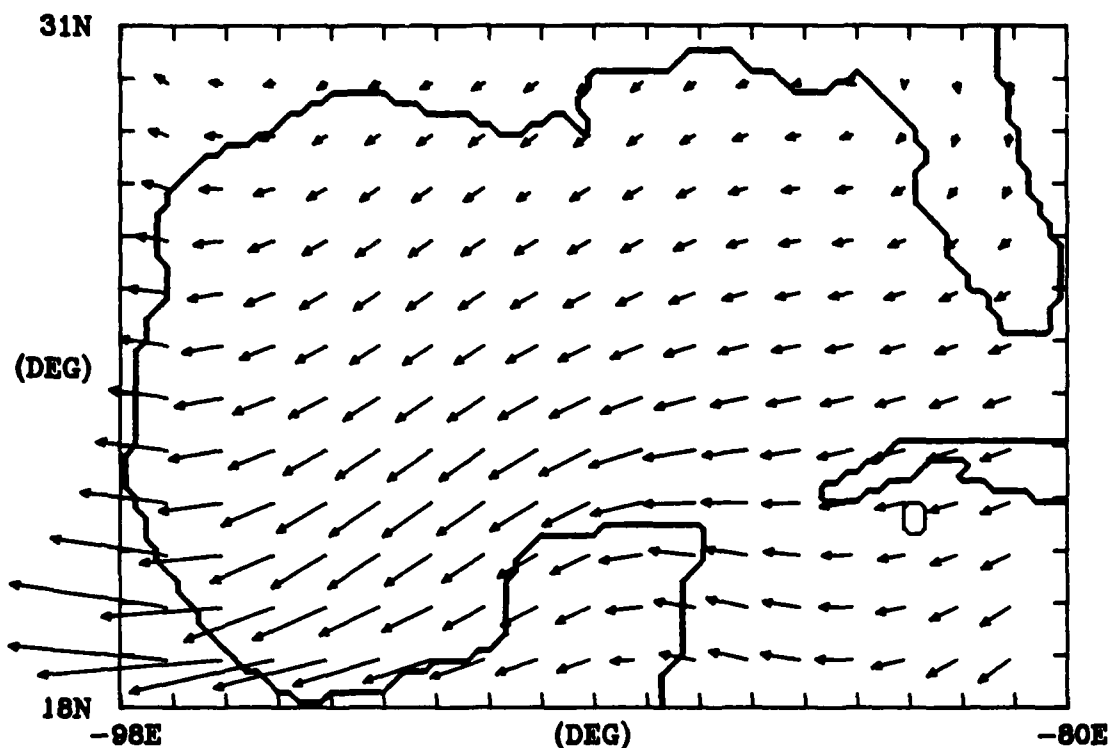


MIN = -1.23E-06 MAX = 3.29E-07

NORDA 323 13-DEC-84

WIND STRESS

FEBRUARY 1967-1982

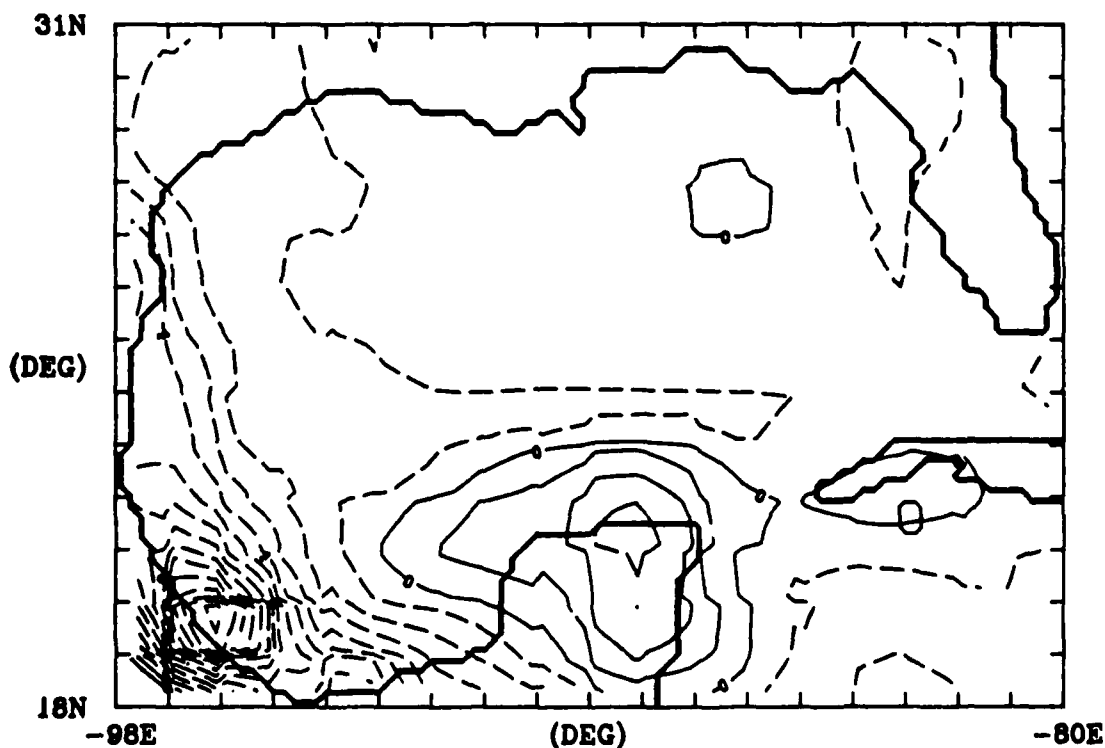


MAXIMUM WIND STRESS = 2.92 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

FEBRUARY 1967-1982 DC = 1.0E-07



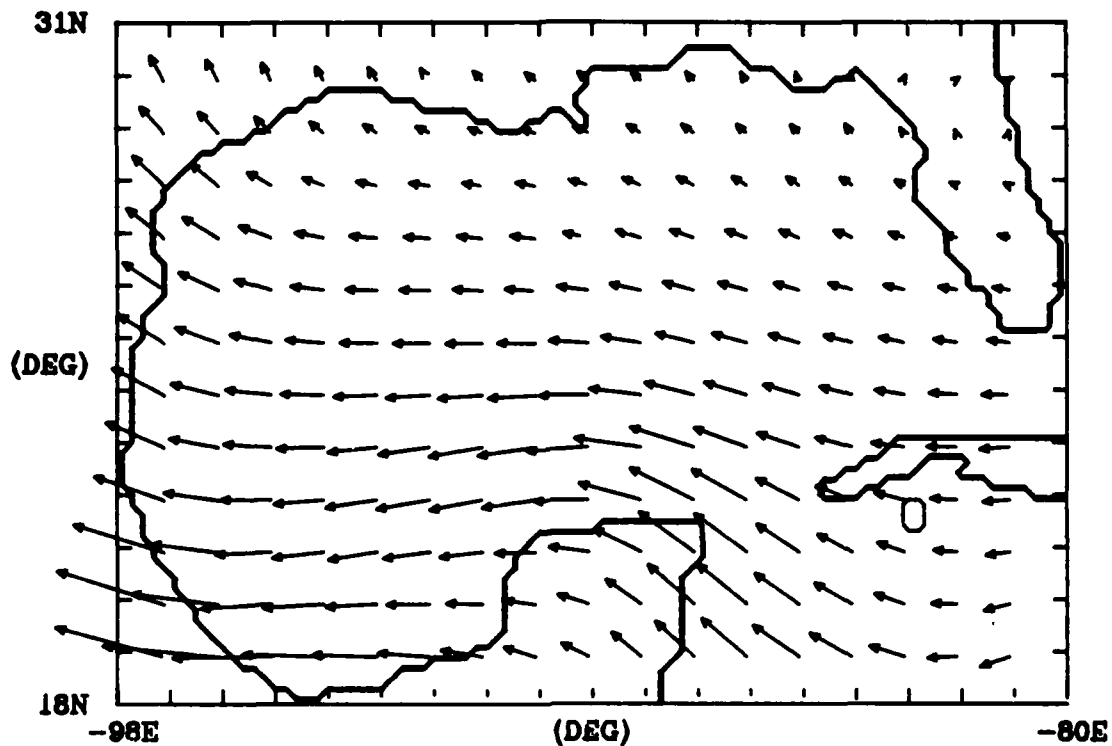
MIN = -1.57E-06 MAX = 3.93E-07

NORDA 323 13-DEC-84

WIND STRESS

MARCH 1967-1982

10

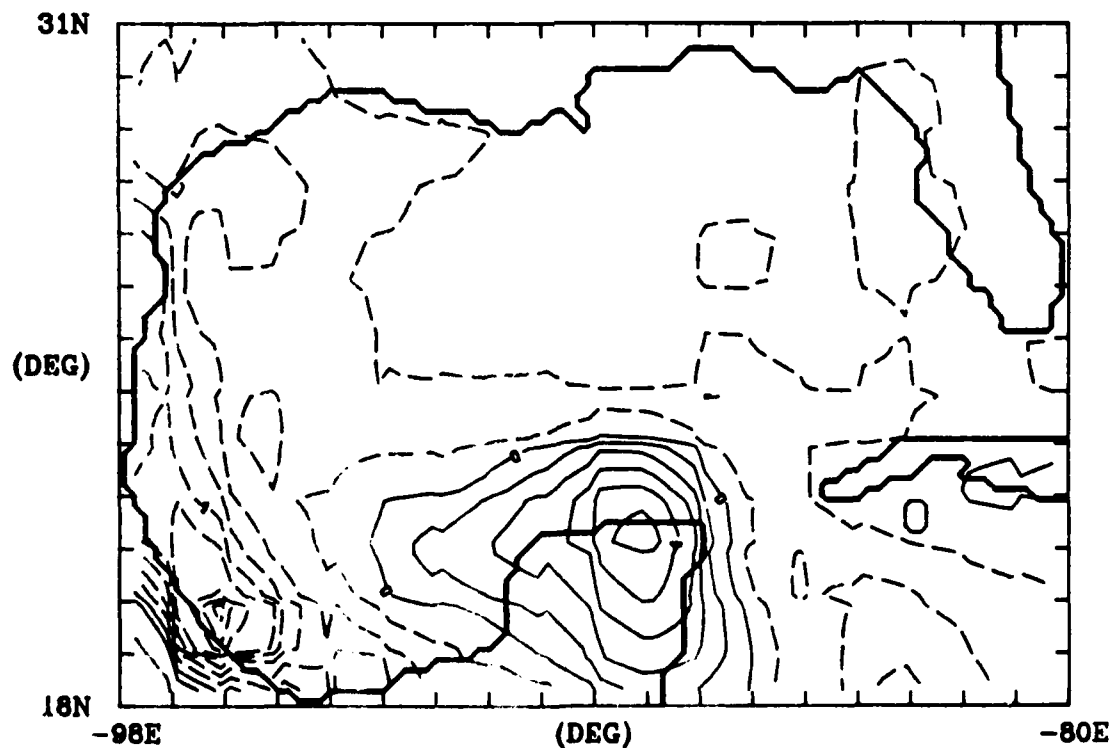


MAXIMUM WIND STRESS = 1.76 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

MARCH 1967-1982 DC = 1.0E-07



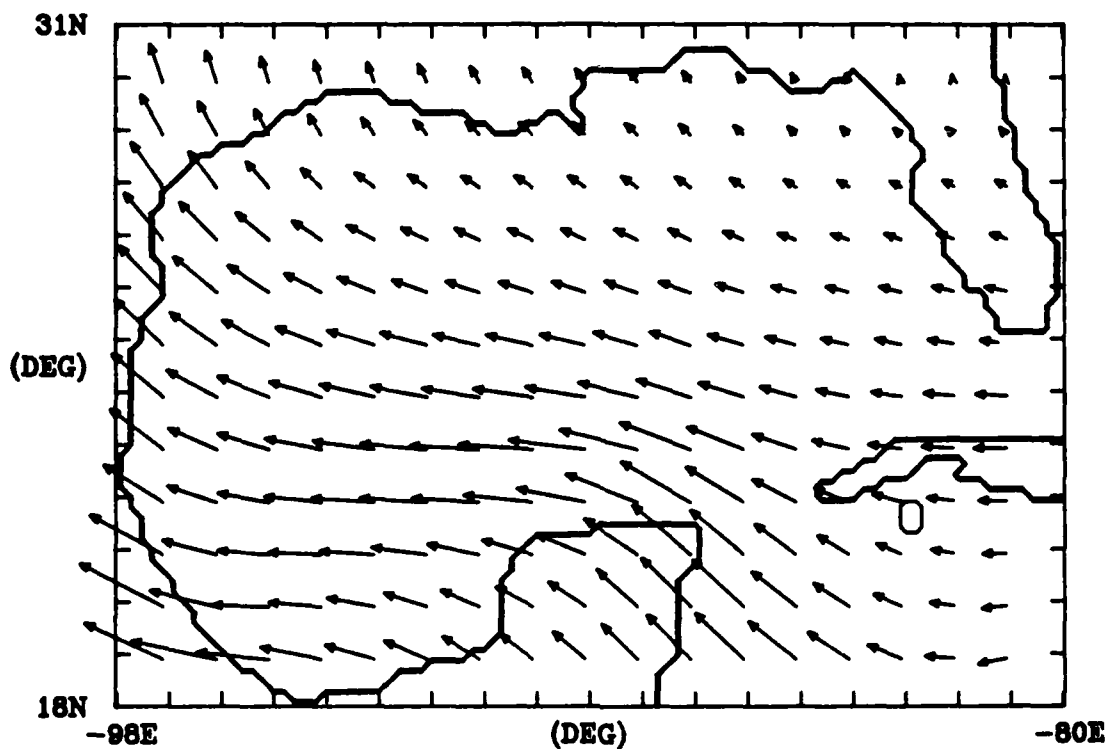
MIN = -9.55E-07 MAX = 6.17E-07

NORDA 323 13-DEC-84

WIND STRESS

APRIL 1967-1982

10

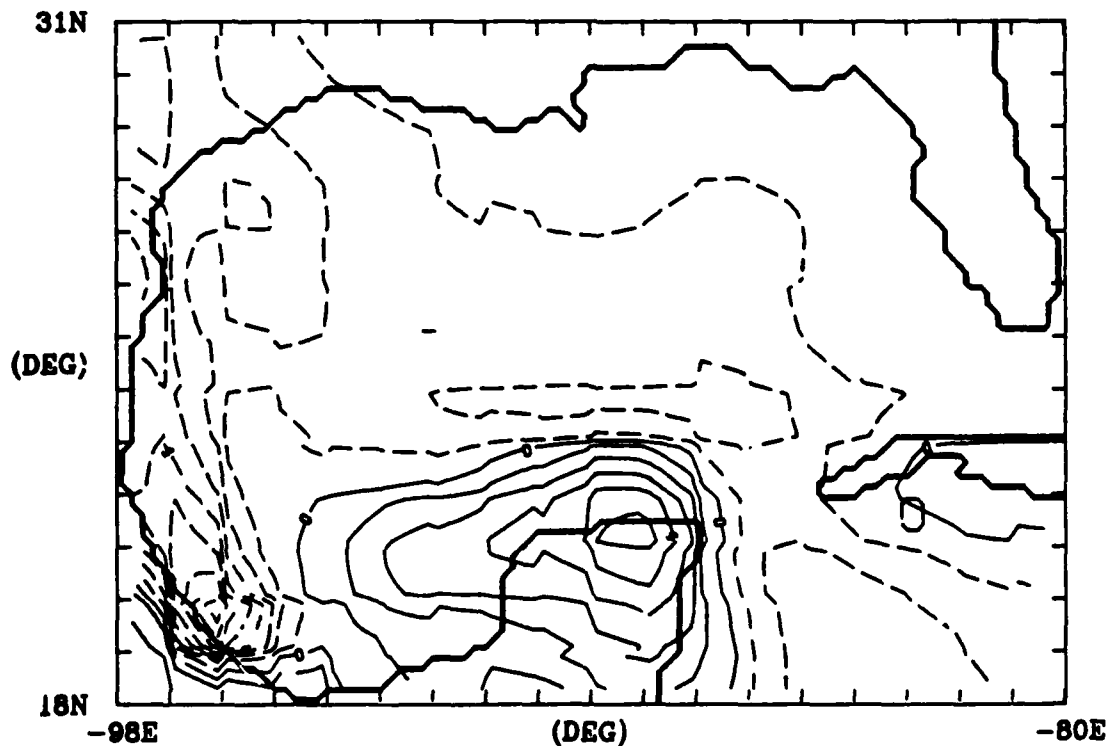


MAXIMUM WIND STRESS = 1.43 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

APRIL 1967-1982 DC = 1.0E-07



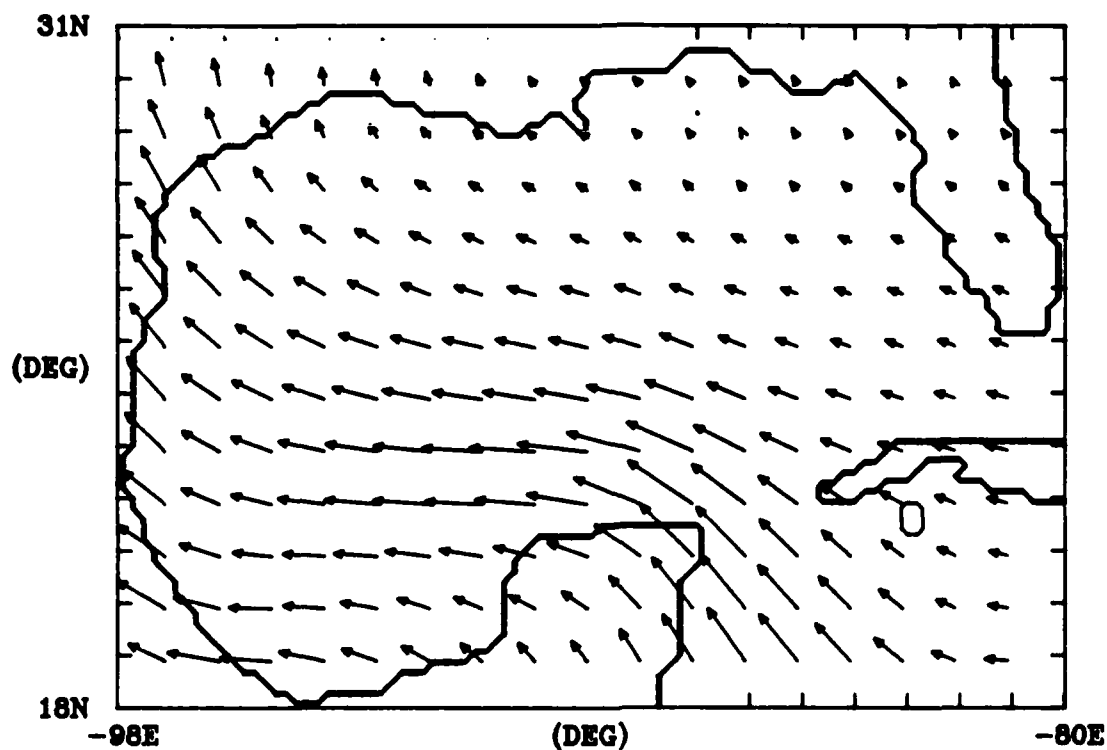
MIN = -6.92E-07 MAX = 6.94E-07

NORDA 323 13-DEC-84

WIND STRESS

MAY 1967-1982

10

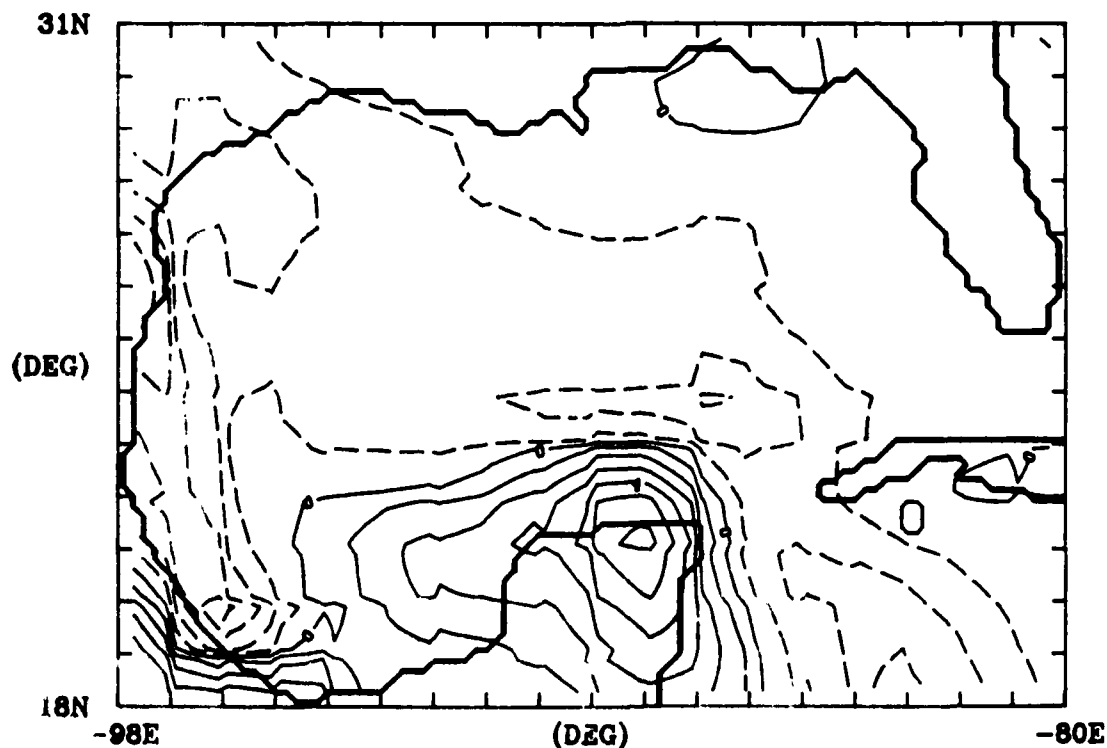


MAXIMUM WIND STRESS = 1.16 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

MAY 1967-1982 DC = 1.0E-07



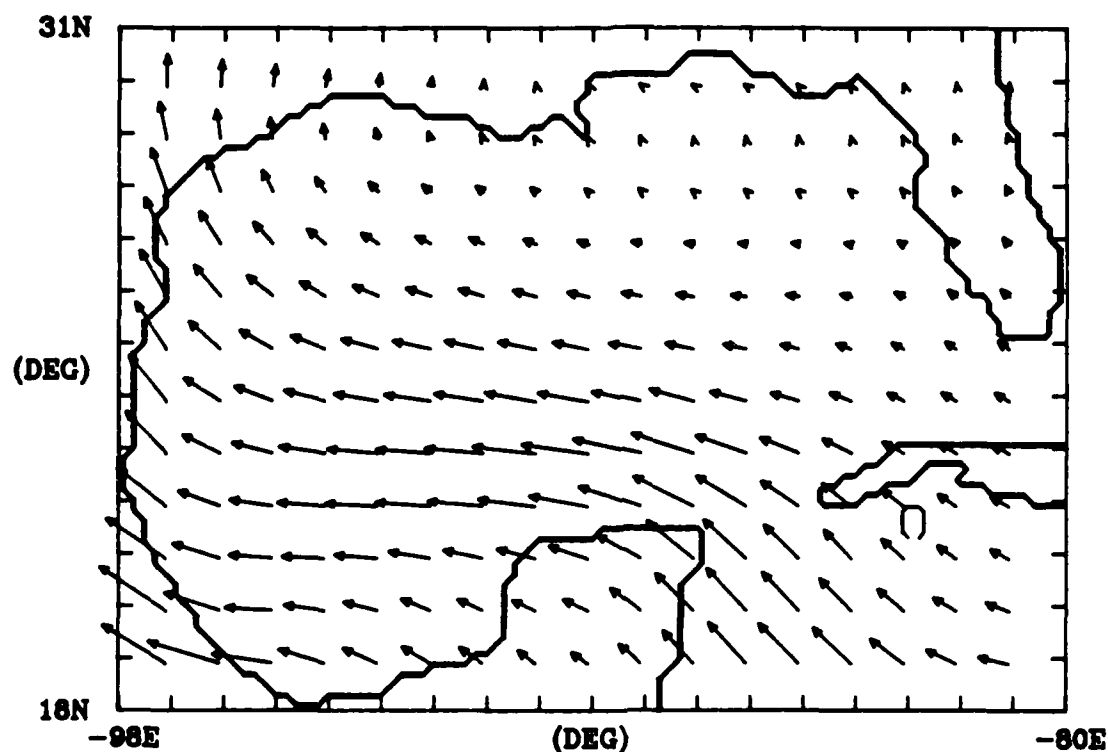
MIN = -5.70E-07 MAX = 6.35E-07

NORDA 323 13-DEC-84

WIND STRESS

JUNE 1967-1982

10 →

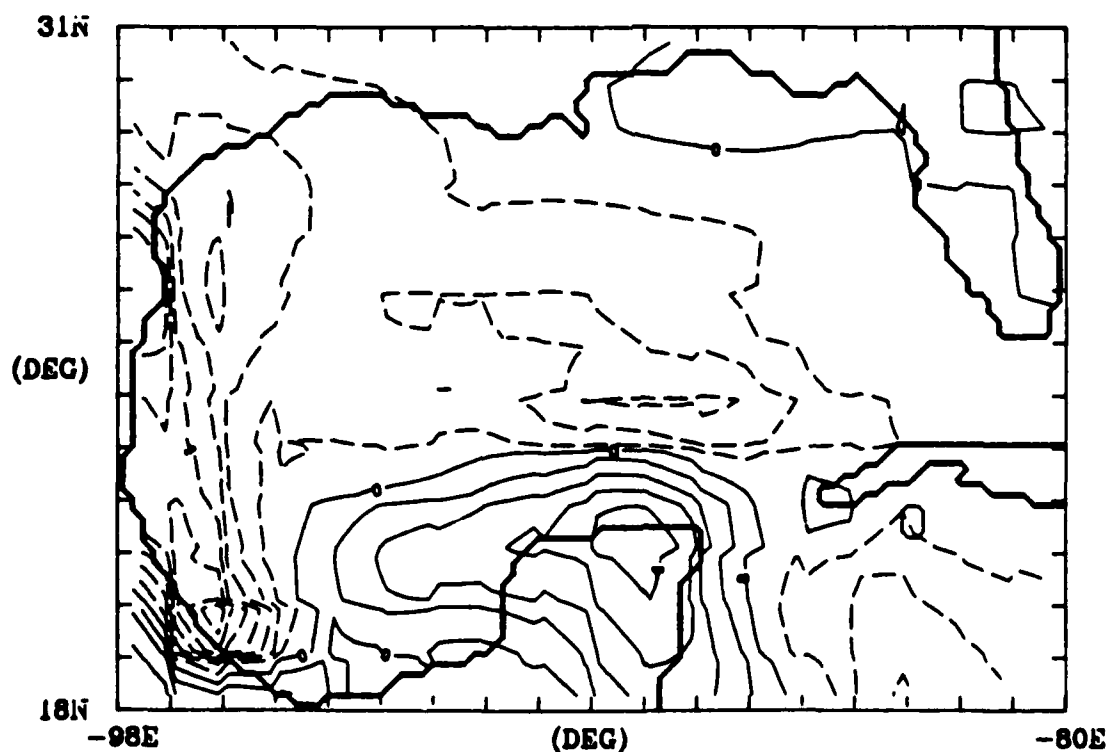


MAXIMUM WIND STRESS = 1.22 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JUNE 1967-1982 DC = 1.0E-07



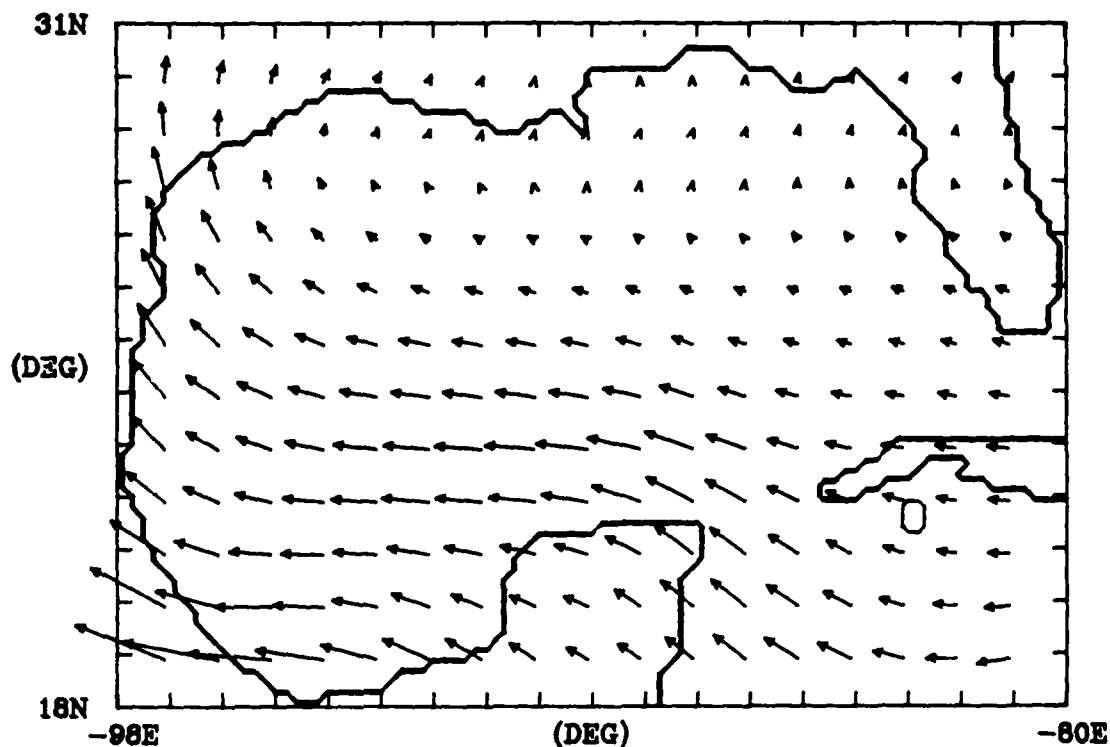
MIN = -8.07E-07 MAX = 5.13E-07

NORDA 323 13-DEC-84

WIND STRESS

JULY 1967-1982

1.0

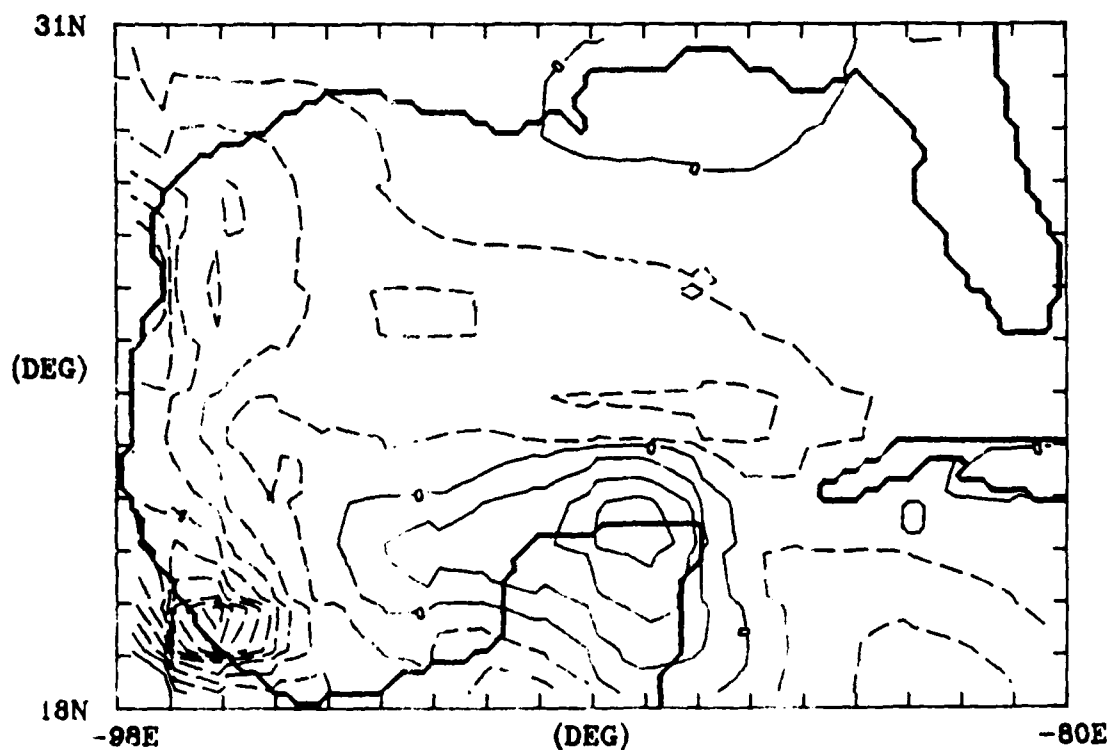


MAXIMUM WIND STRESS = 1.47 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JULY 1967-1982 DC = 1.0E-07

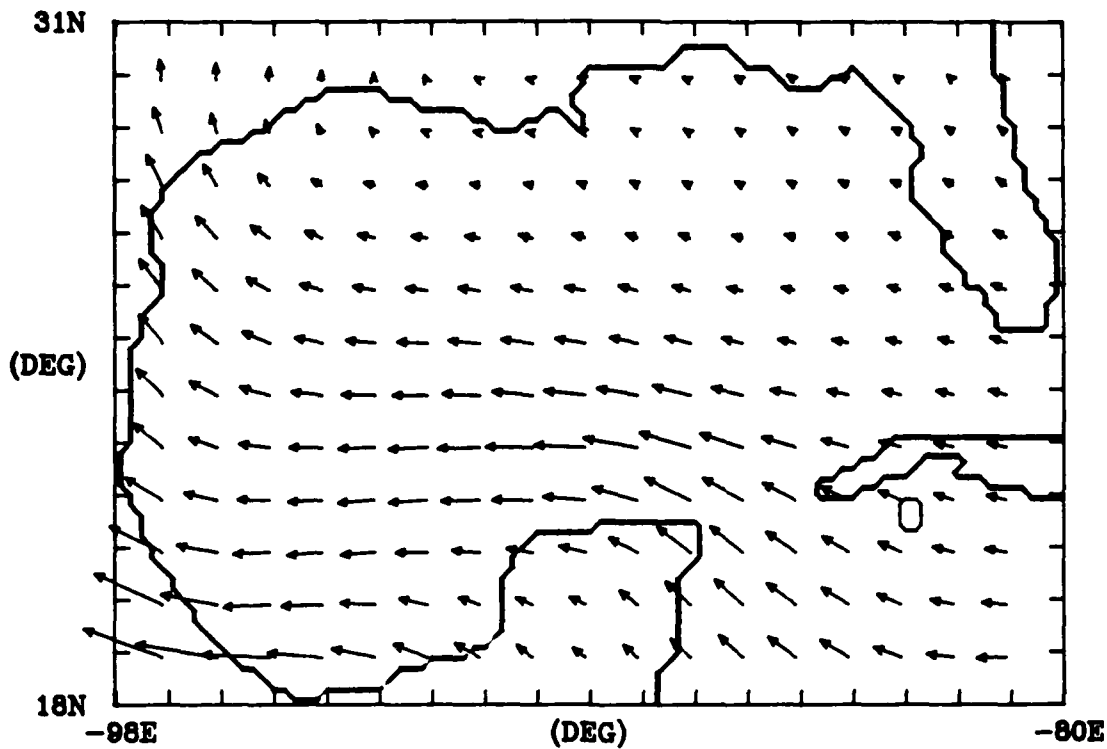


MIN = -9.71E-07 MAX = 3.72E-07

NORDA 323 13-DEC-84

WIND STRESS

AUGUST 1967-1982

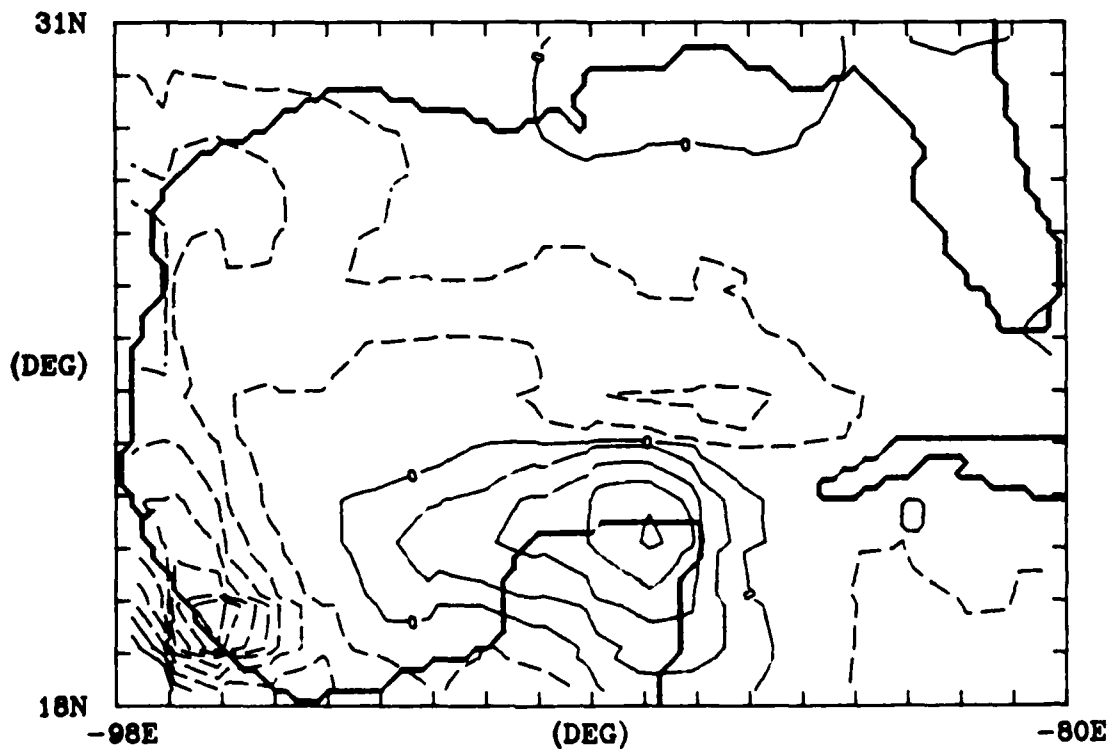


MAXIMUM WIND STRESS = 1.28 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

AUGUST 1967-1982 DC = 1.0E-07



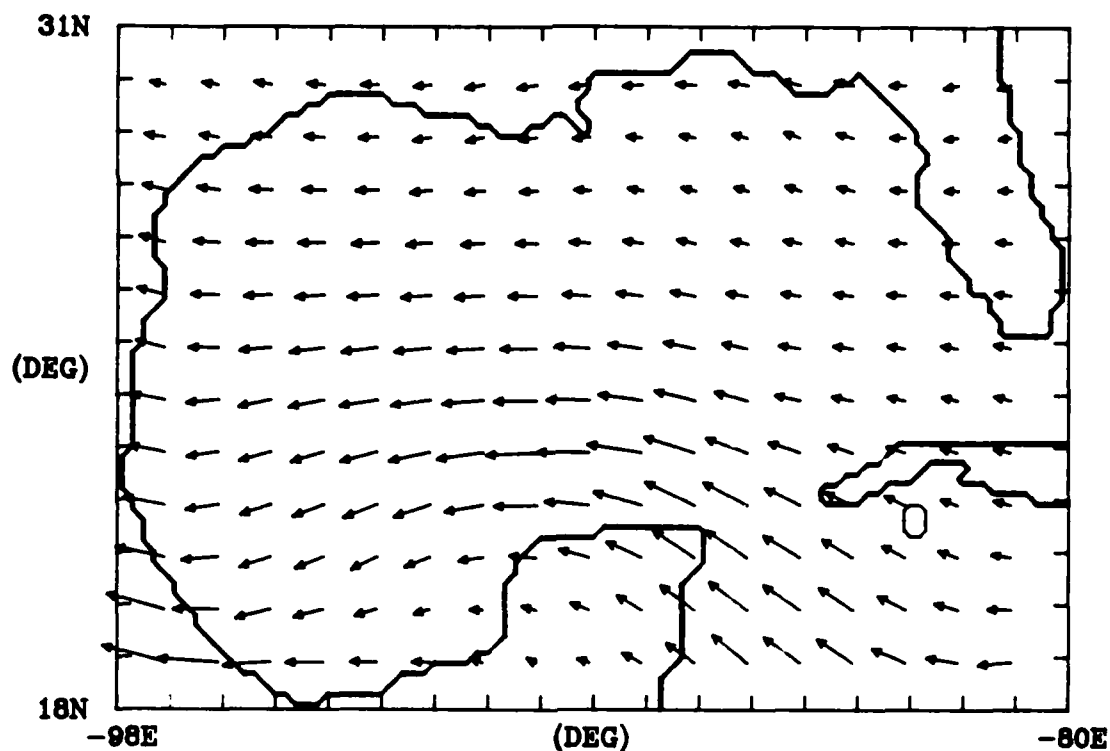
MIN = -8.08E-07 MAX = 4.28E-07

NORDA 323 13-DEC-84

WIND STRESS

SEPTEMBER 1967-1982

1.0

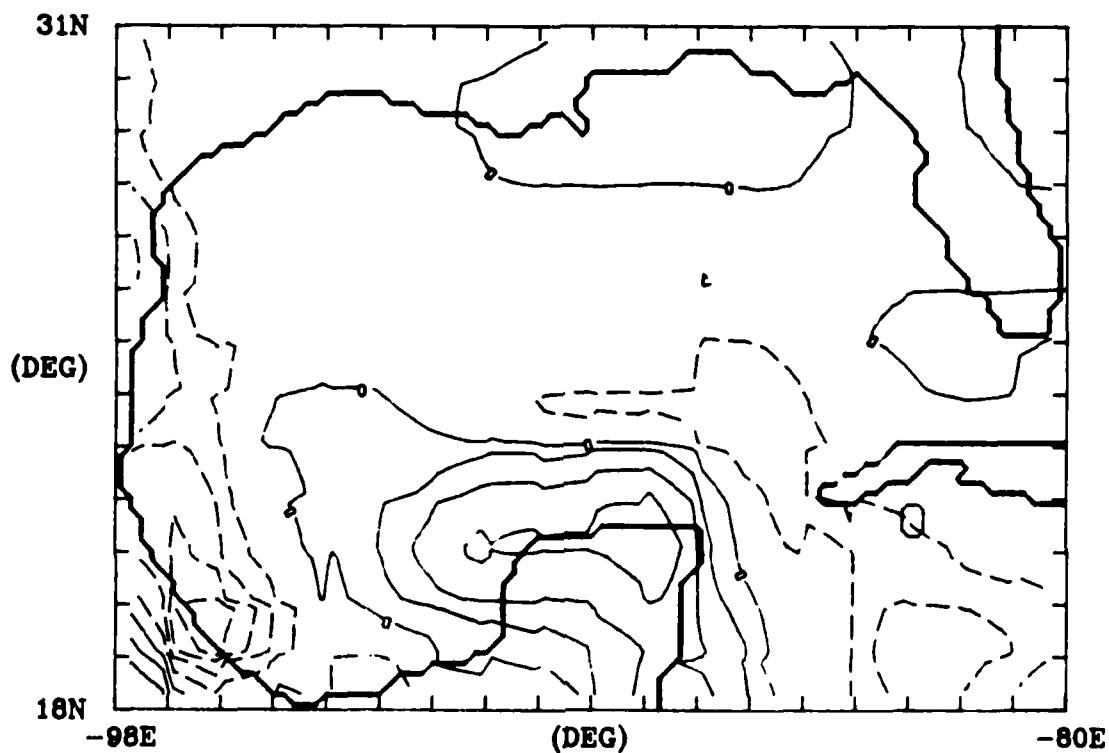


MAXIMUM WIND STRESS = 0.98 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

SEPTEMBER 1967-1982 DC = 1.0E-07

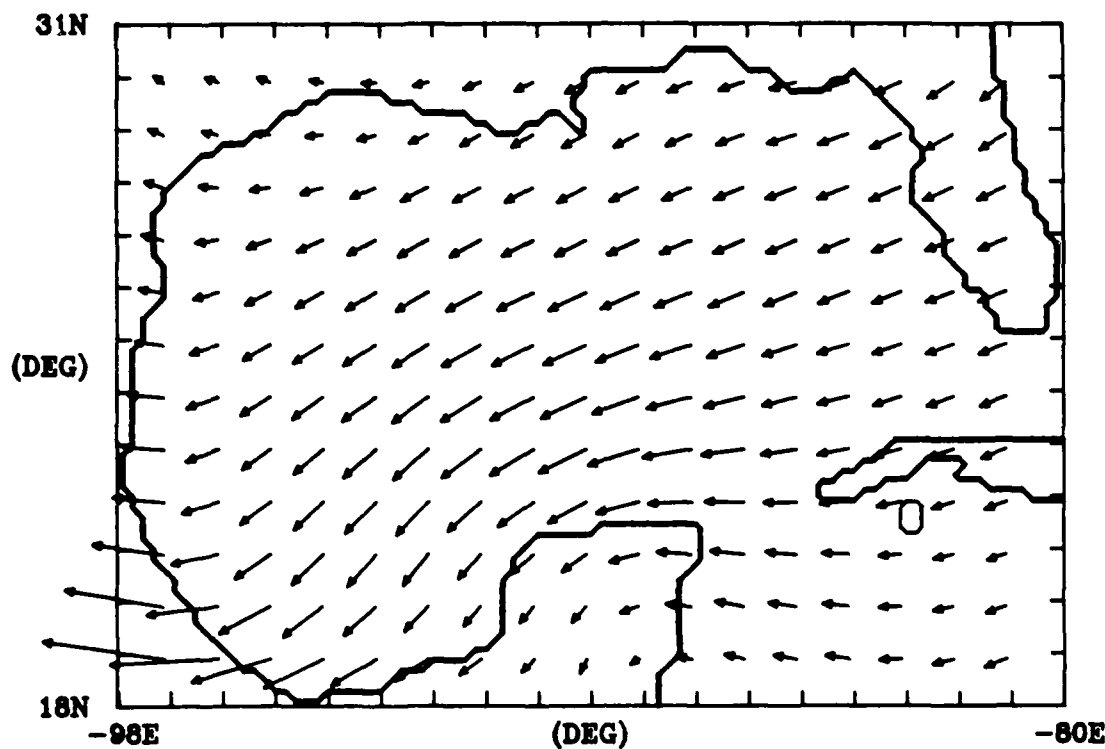


MIN = -5.34E-07 MAX = 3.83E-07

NORDA 323 13-DEC-84

WIND STRESS

OCTOBER 1967-1982

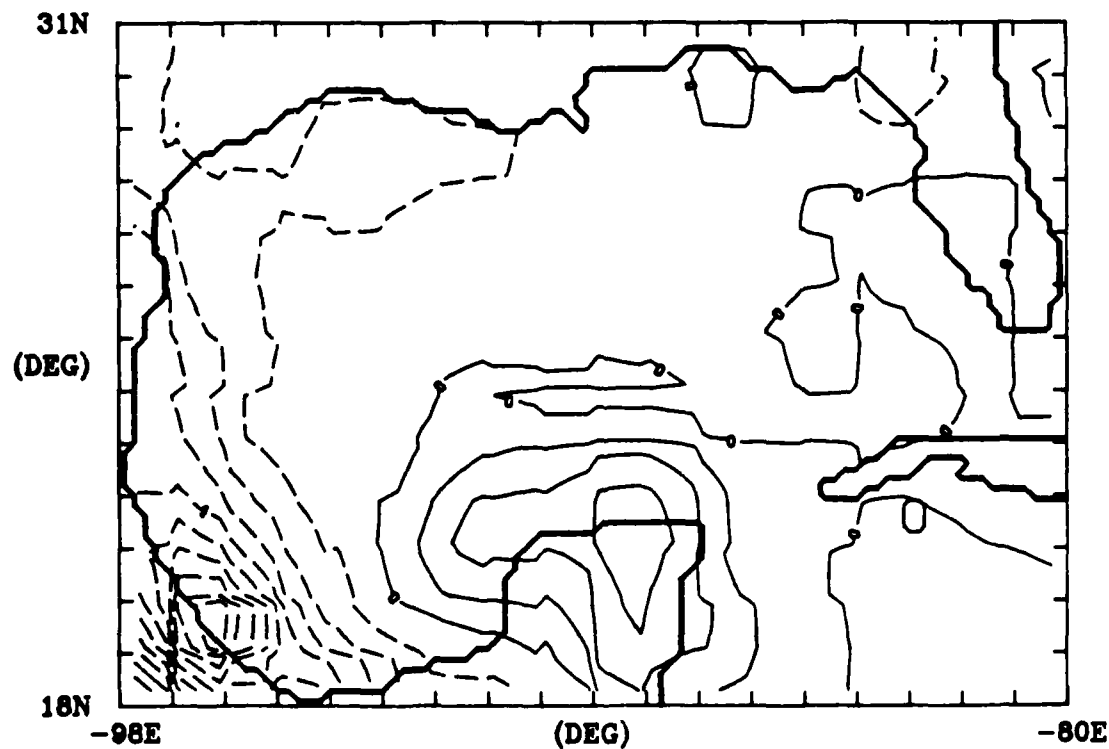


MAXIMUM WIND STRESS = 1.90 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

OCTOBER 1967-1982 DC = 1.0E-07

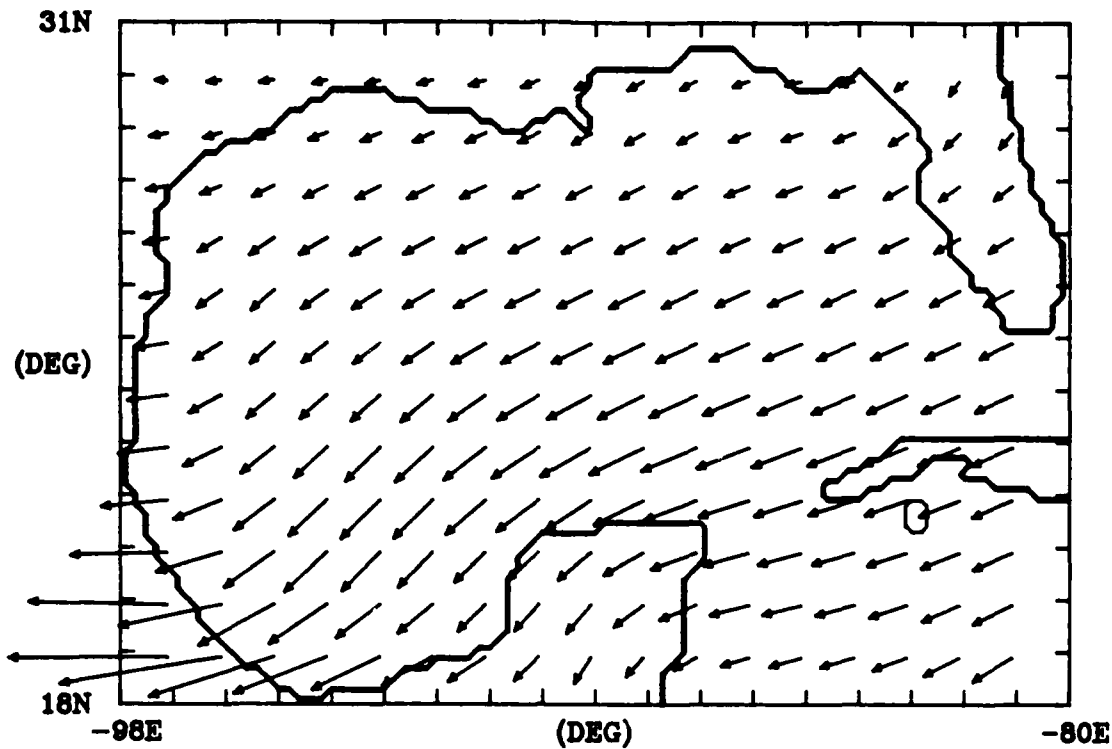


MIN = -9.88E-07 MAX = 3.59E-07

NORDA 323 13-DEC-84

WIND STRESS

NOVEMBER 1967-1982

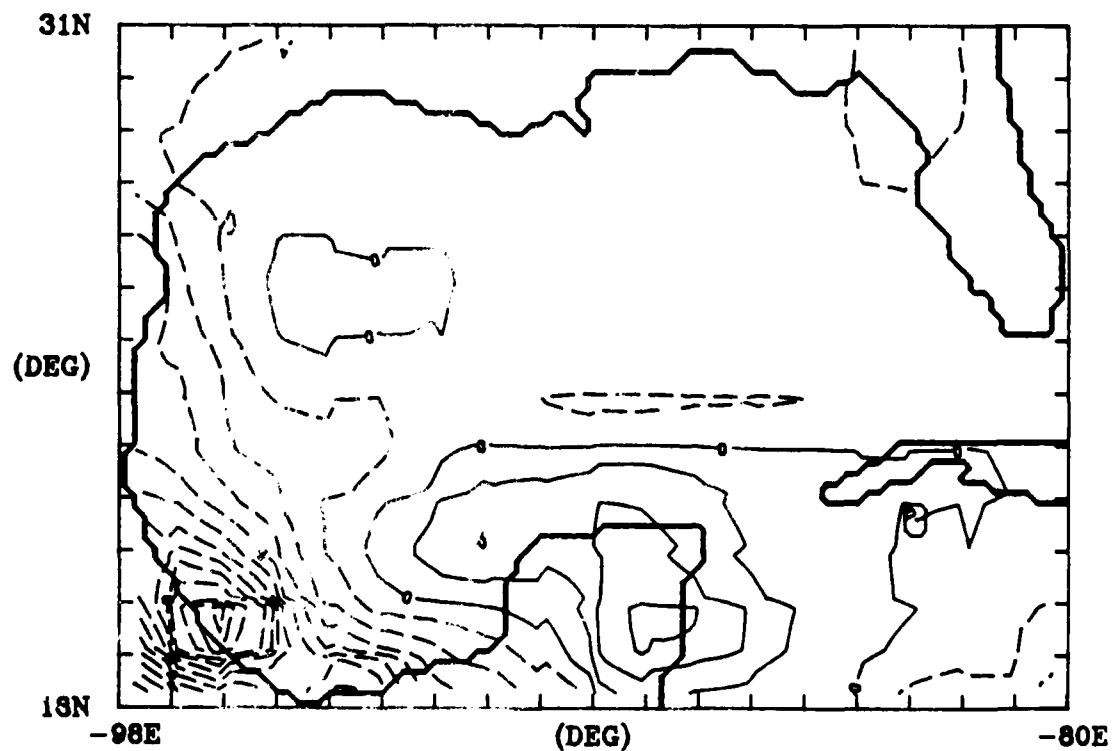


MAXIMUM WIND STRESS = 2.67 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

NOVEMBER 1967-1982 DC = 1.0E-07



MIN = -1.34E-06

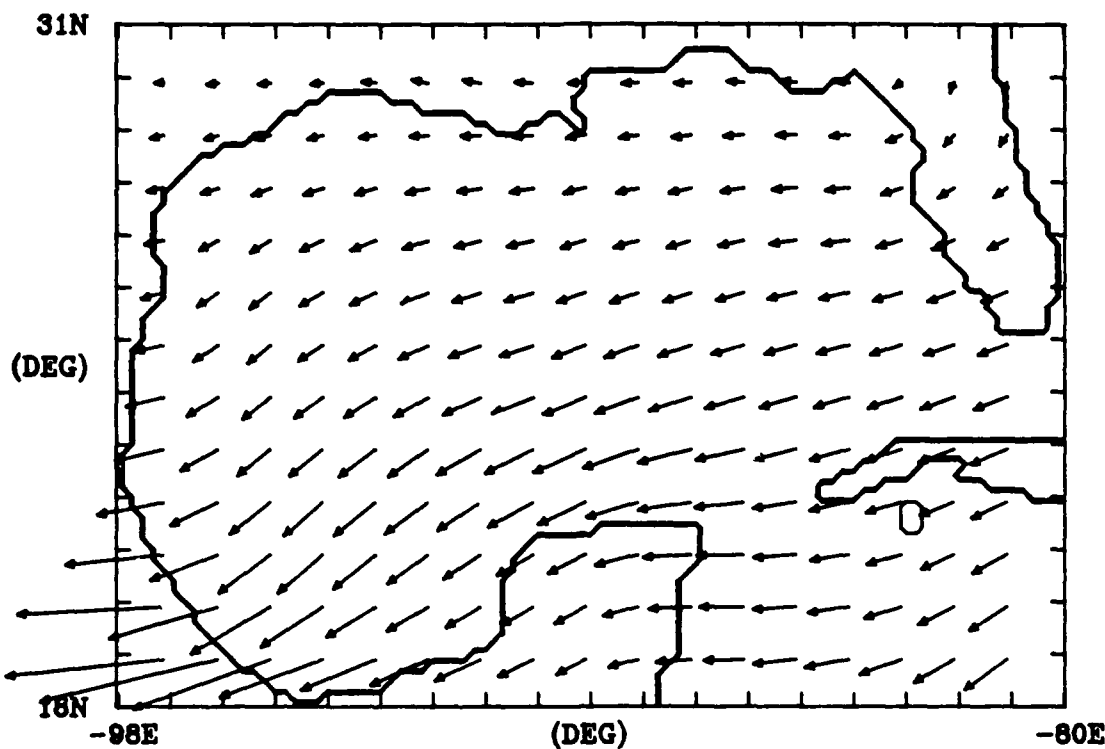
MAX = 3.29E-07

NORDA 323 13-DEC-84

WIND STRESS

DECEMBER 1967-1982

1.0

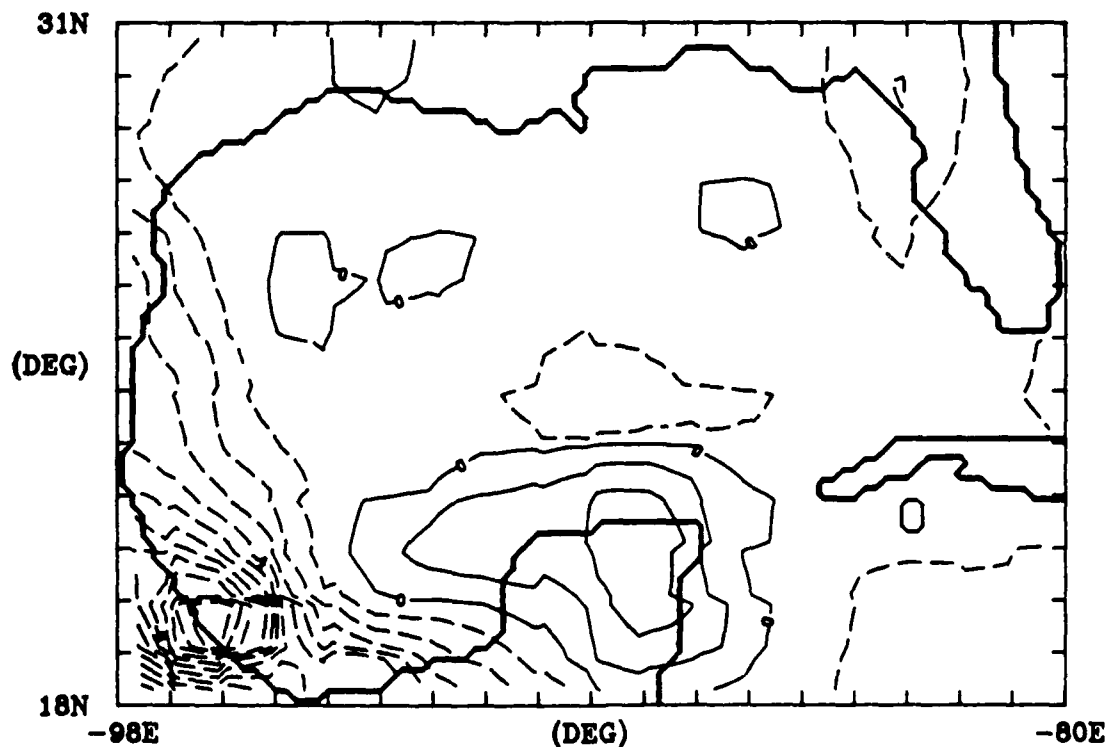


MAXIMUM WIND STRESS = 2.96 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

DECEMBER 1967-1982 DC = 1.0E-07

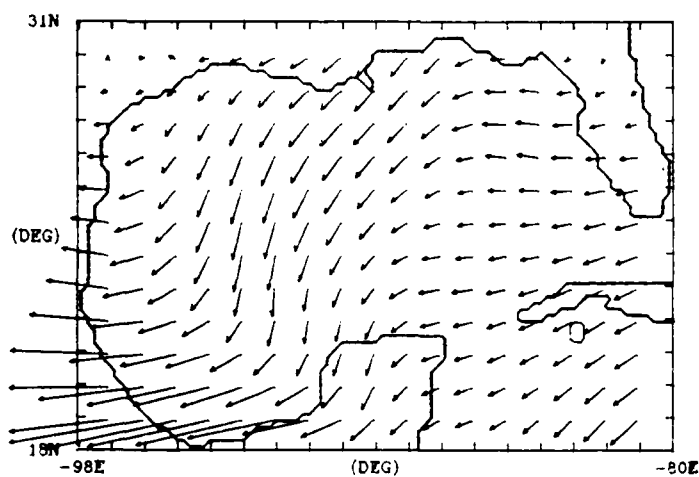


MIN = -1.45E-06 MAX = 2.75E-07

NORDA 373 13-DEC-84

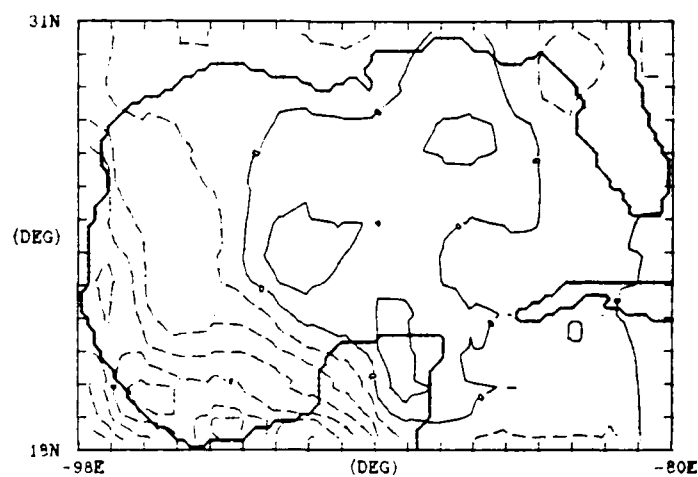
APPENDIX D: MONTHLY AVERAGED WIND STRESS AND WIND STRESS CURL
EACH YEAR FROM 1967-1982

WIND STRESS
JANUARY/1967



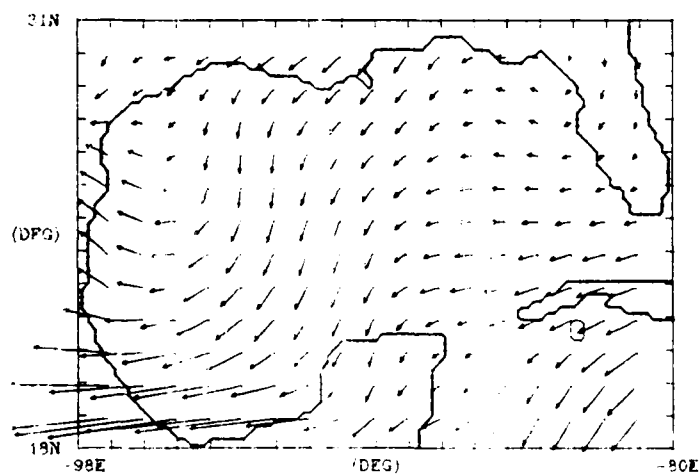
MAXIMUM WIND STRESS = 3.41 DYNES/CM²
NOFPA 5.7 13 DEC-64

WIND STRESS CURL
JANUARY/1967 DC = 2.0E-07 MKS



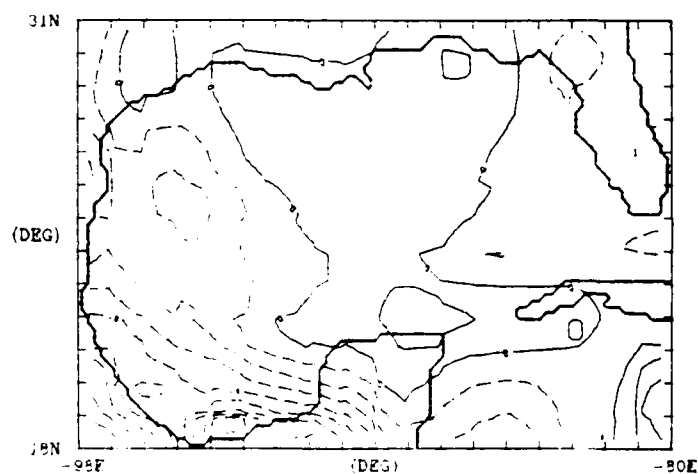
MIN = -1.29E-06 MAX = 3.73E-07
NOFPA 5.7 13 DEC-64

WIND STRESS
FEBRUARY/1967



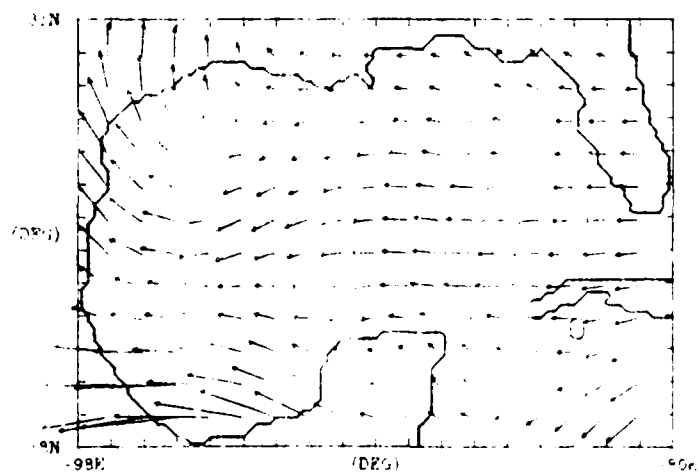
MAXIMUM WIND STRESS = 3.16 DYNES/CM²
NOFPA 5.7 13 DEC-64

WIND STRESS CURL
FEBRUARY/1967 DC = 2.0E-07 MKS



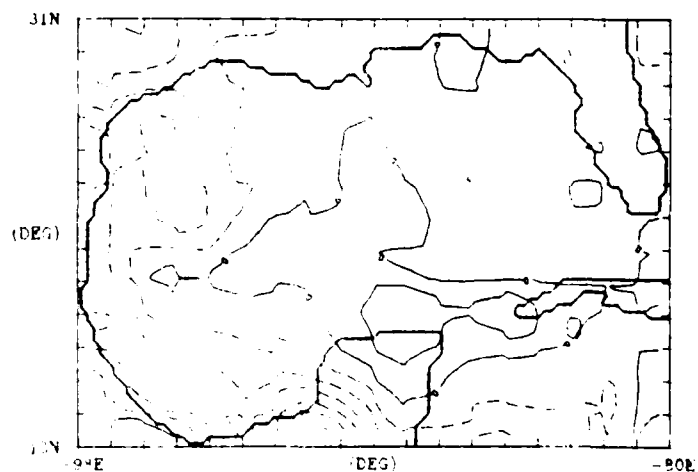
MIN = -1.84E-06 MAX = 5.13E-07
NOFPA 5.7 13 DEC-64

WIND STRESS
MARCH/1967



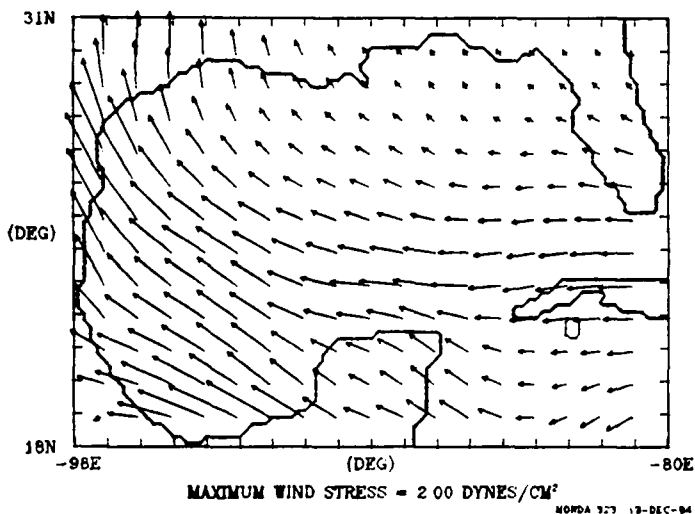
MAXIMUM WIND STRESS = 2.1 DYNES/CM²
NOFPA 5.7 13 DEC-64

WIND STRESS CURL
MARCH/1967 DC = 2.0E-07 MKS

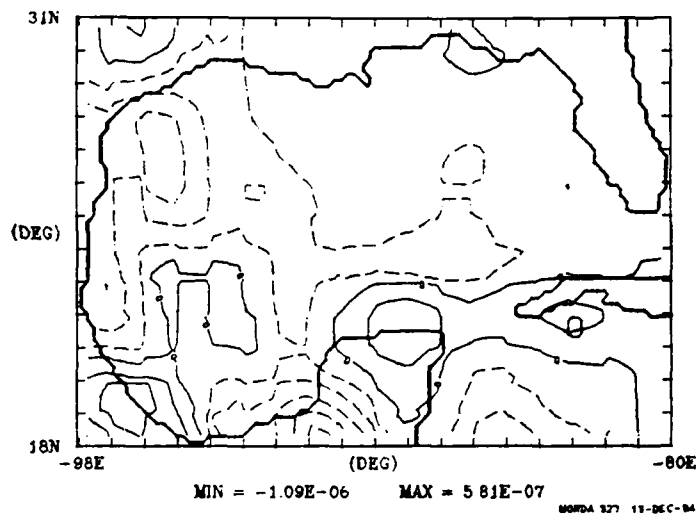


MIN = -1.12E-06 MAX = 3.51E-07
NOFPA 5.7 13 DEC-64

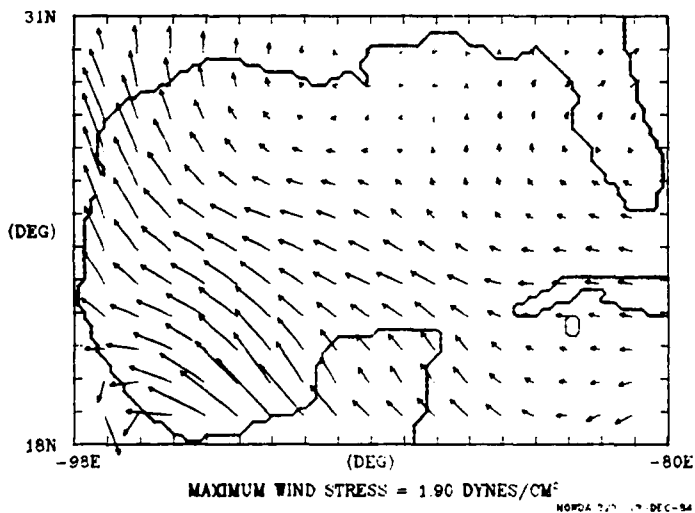
WIND STRESS
APRIL/1967



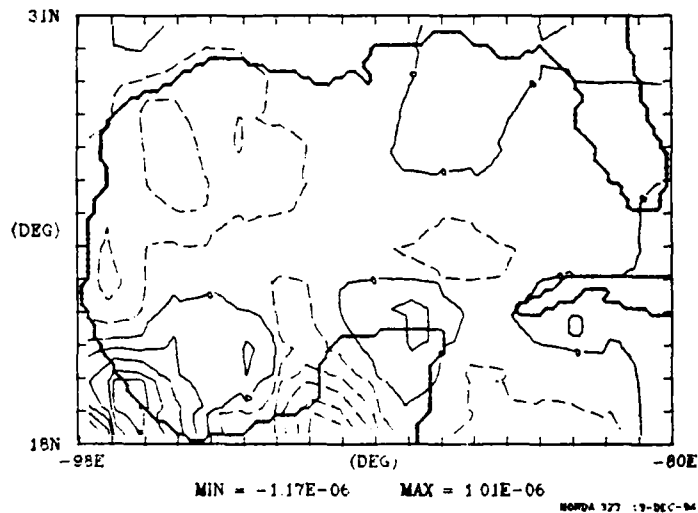
WIND STRESS CURL
APRIL/1967 DC = 2.0E-07 MKS



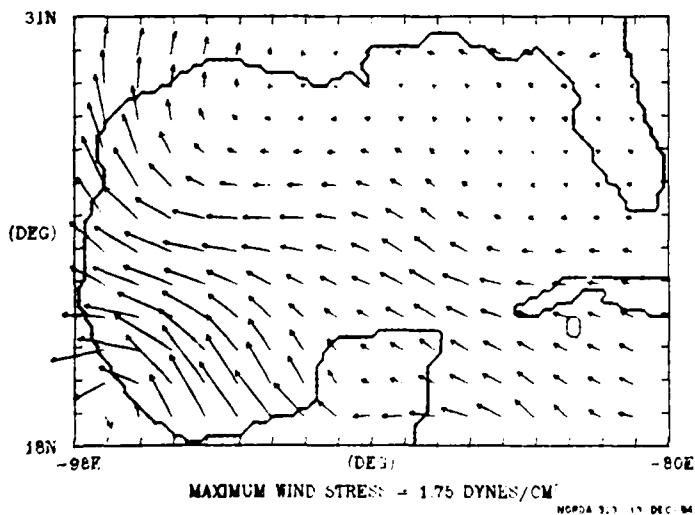
WIND STRESS
MAY/1967



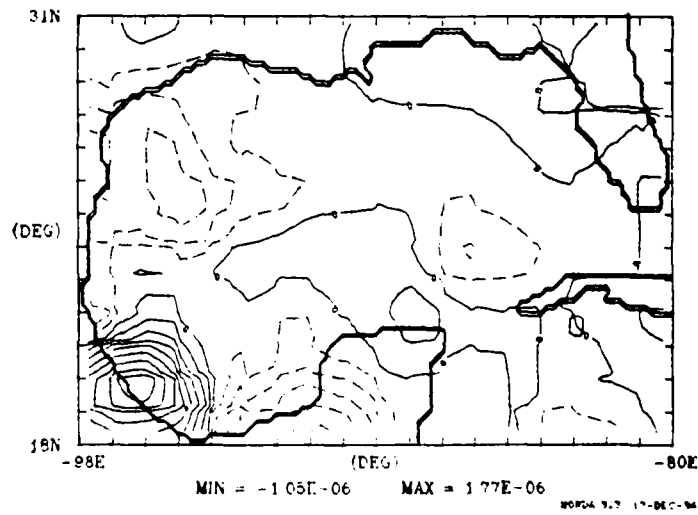
WIND STRESS CURL
MAY/1967 DC = 2.0E-07 MKS



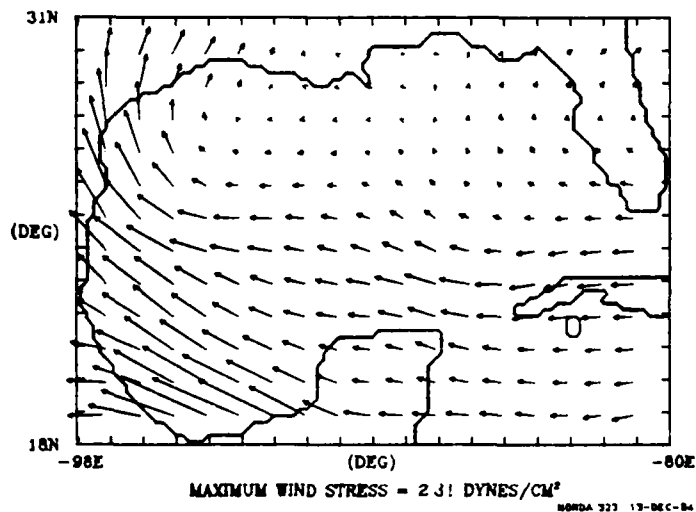
WIND STRESS
JUNE/1967



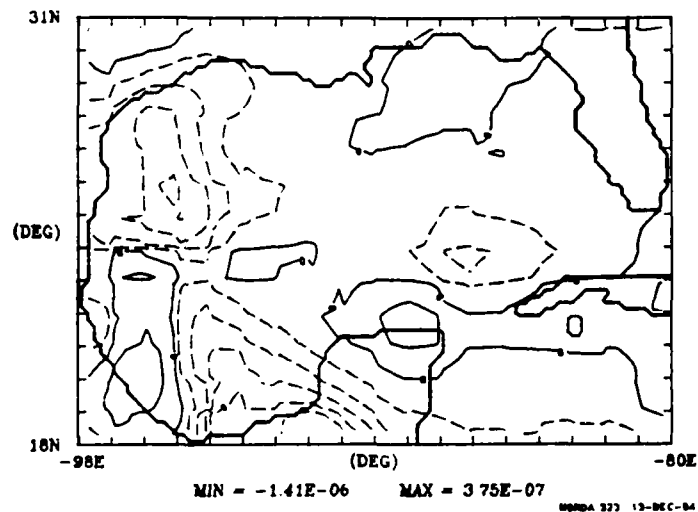
WIND STRESS CURL
JUNE/1967 DC = 2.0E-07 MKS



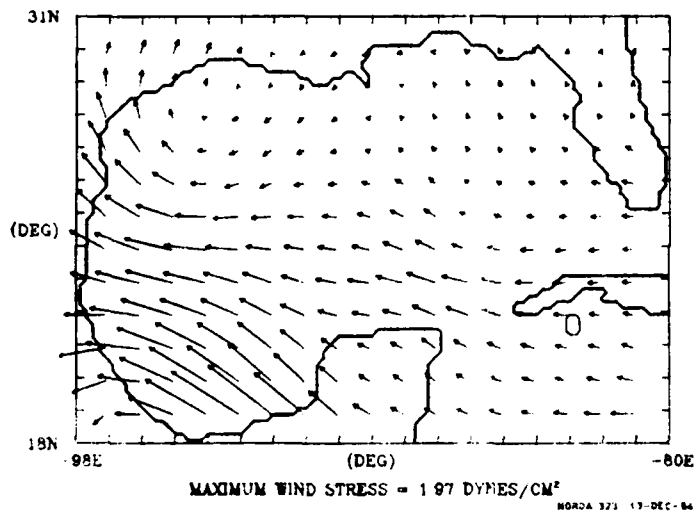
WIND STRESS
JULY/1967



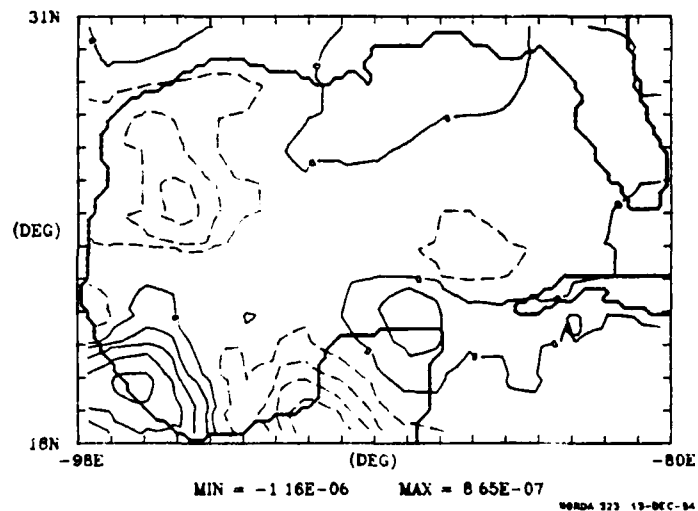
WIND STRESS CURL
JULY/1967 DC = 2.0E-07 MKS



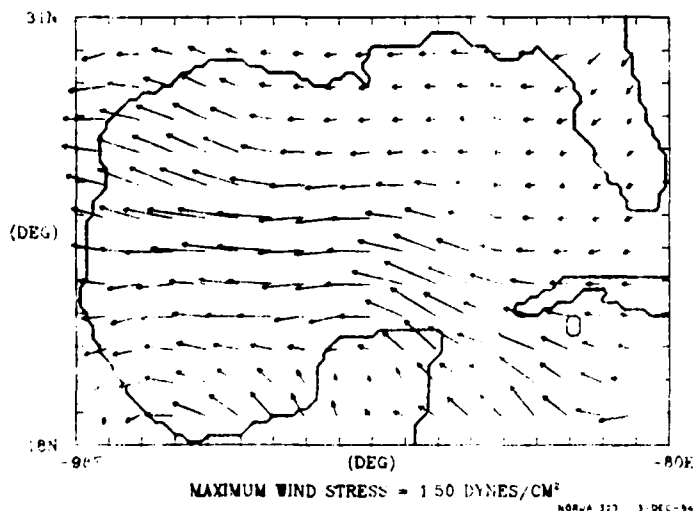
WIND STRESS
AUGUST/1967



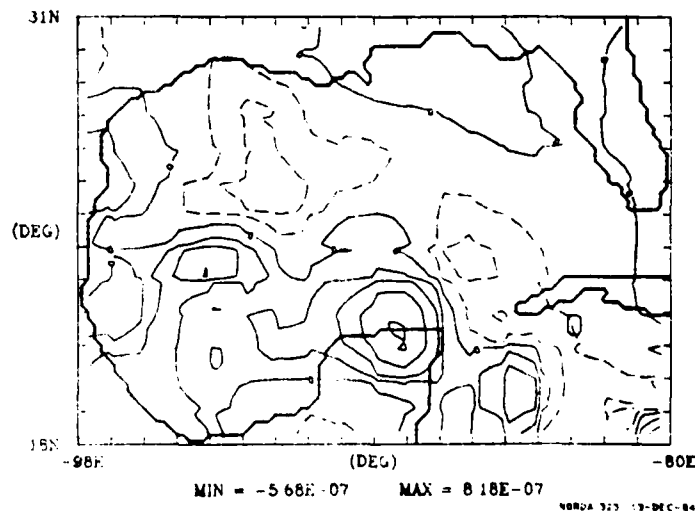
WIND STRESS CURL
AUGUST/1967 DC = 2.0E-07 MKS



WIND STRESS
SEPTEMBER/1967



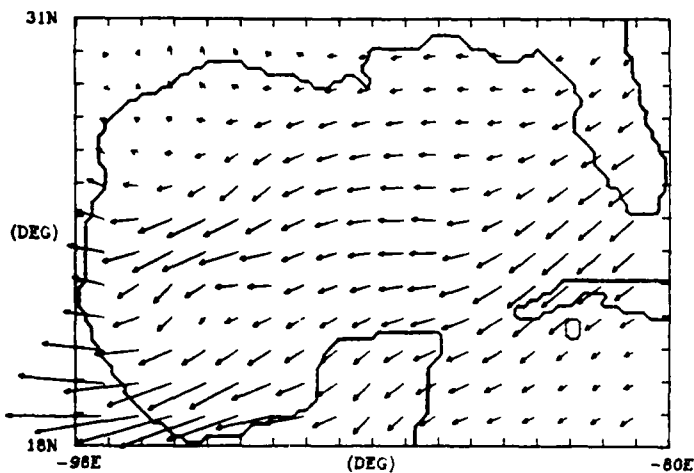
WIND STRESS CURL
SEPTEMBER/1967 DC = 2.0E-07 MKS



WIND STRESS

OCTOBER/1967

1.0

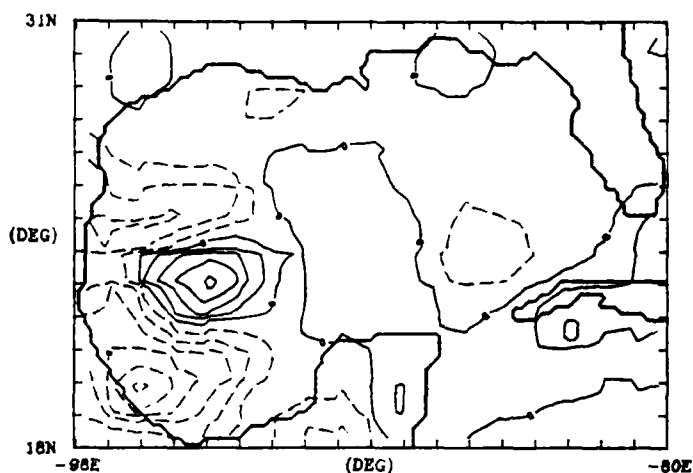


MAXIMUM WIND STRESS = 2.57 DYNES/CM²

NORDA 327 13-DEC-84

WIND STRESS CURL

OCTOBER/1967 DC = 2.0E-07 MKS



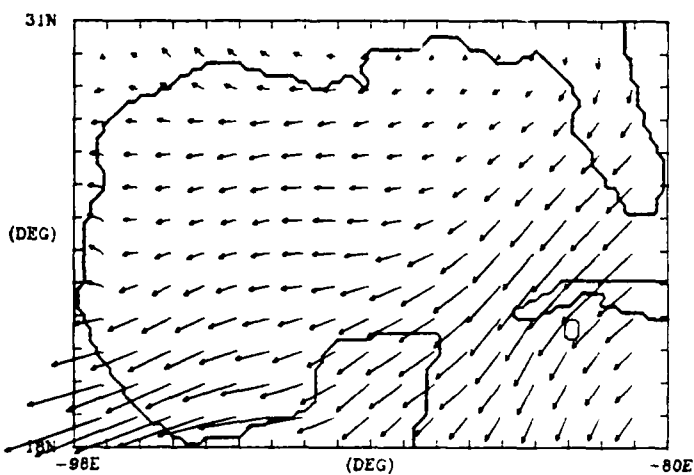
MIN = -1.25E-06 MAX = 8.51E-07

NORDA 327 13-DEC-84

WIND STRESS

NOVEMBER/1967

1.0

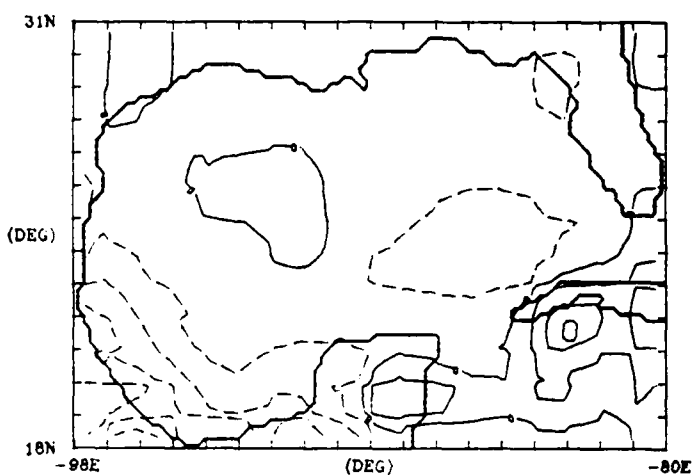


MAXIMUM WIND STRESS = 2.71 DYNES/CM²

NORDA 327 13-DEC-84

WIND STRESS CURL

NOVEMBER/1967 DC = 2.0E-07 MKS



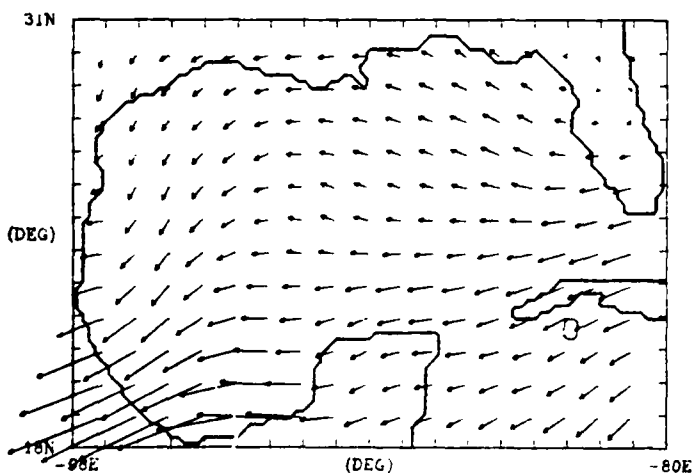
MIN = -9.87E-07 MAX = 5.04E-07

NORDA 327 13-DEC-84

WIND STRESS

DECEMBER/1967

1.0

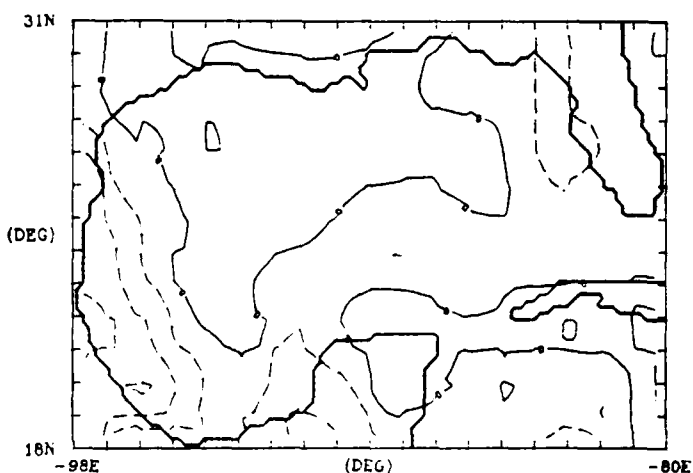


MAXIMUM WIND STRESS = 2.56 DYNES/CM²

NORDA 327 13-DEC-84

WIND STRESS CURL

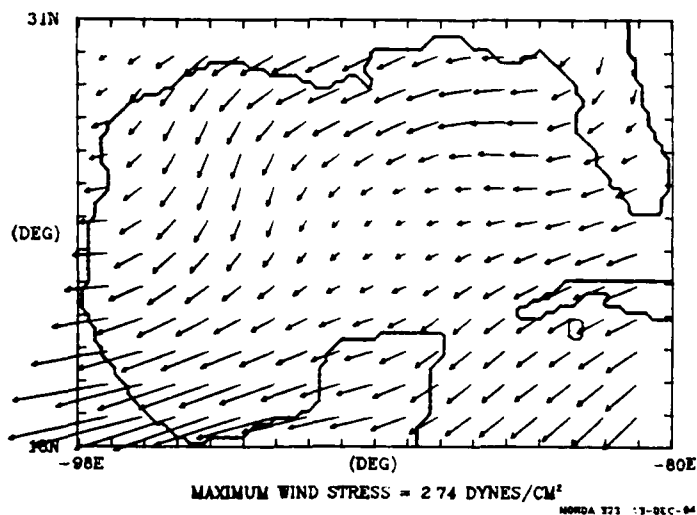
DECEMBER/1967 DC = 2.0E-07 MKS



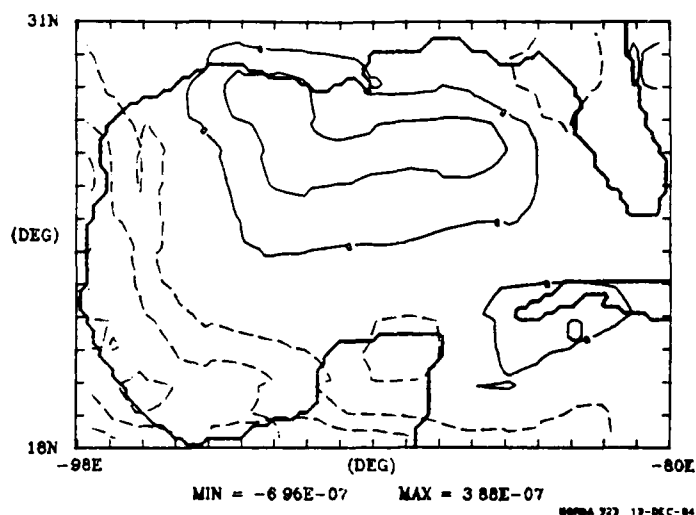
MIN = -7.95E-07 MAX = 2.41E-07

NORDA 327 13-DEC-84

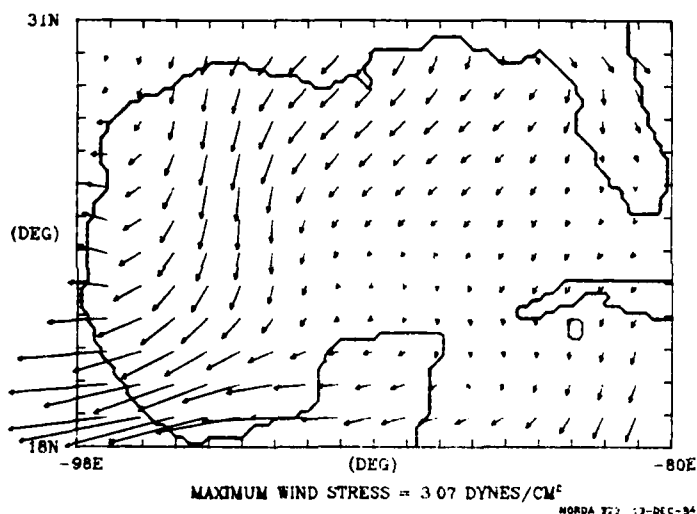
WIND STRESS
JANUARY/1968



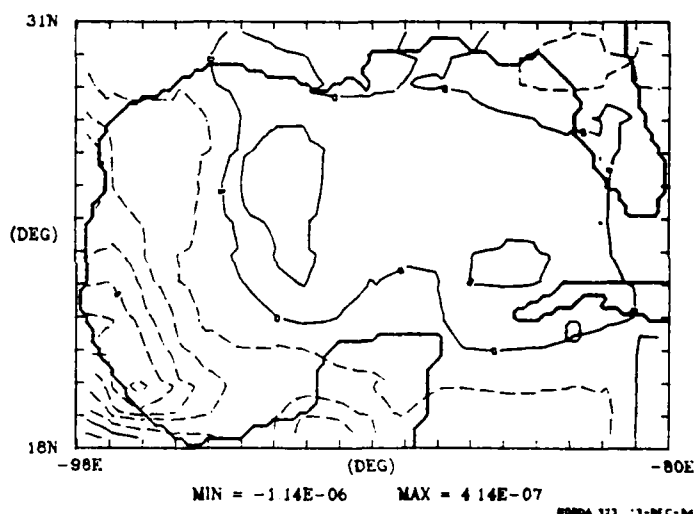
WIND STRESS CURL
JANUARY/1968 DC = 2.0E-07 MKS



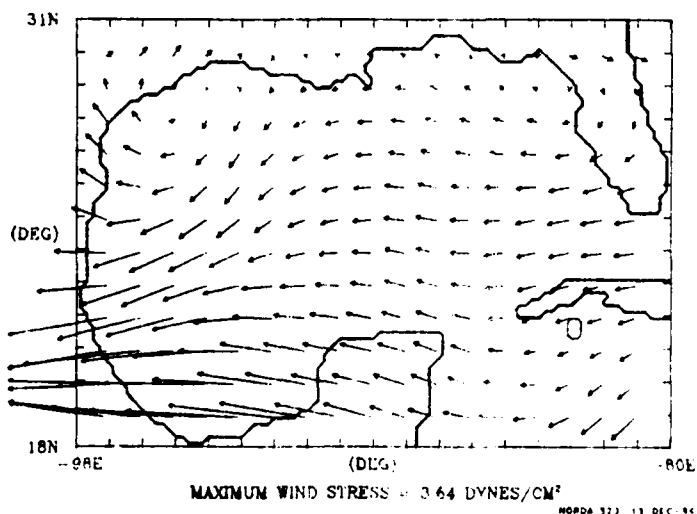
WIND STRESS
FEBRUARY/1968



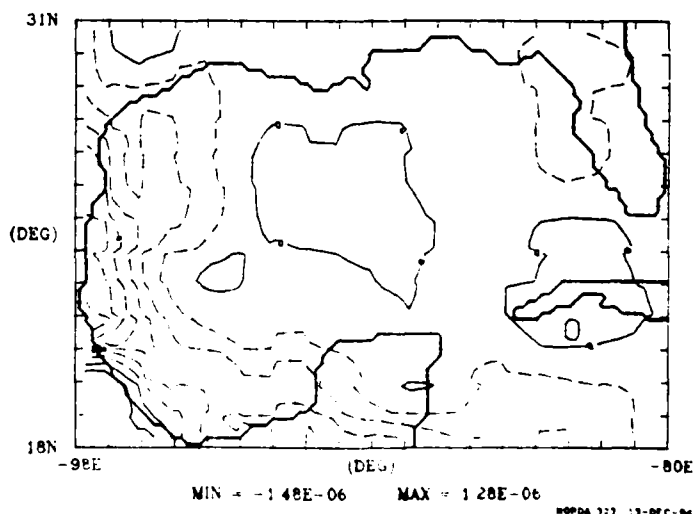
WIND STRESS CURL
FEBRUARY/1968 DC = 2.0E-07 MKS



WIND STRESS
MARCH/1968



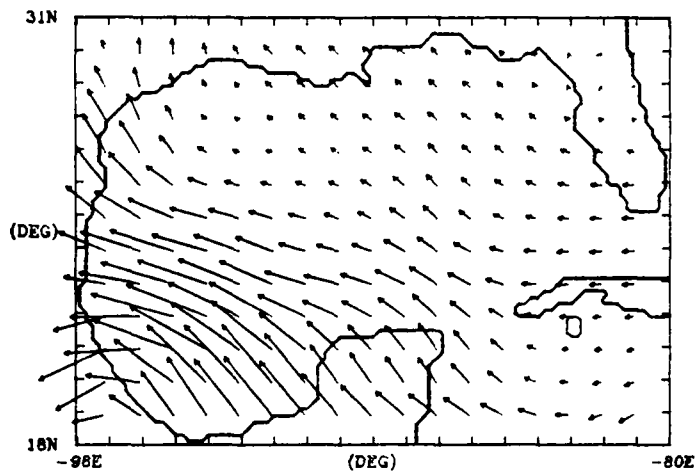
WIND STRESS CURL
MARCH/1968 DC = 2.0E-07 MKS



WIND STRESS

APRIL/1968

10

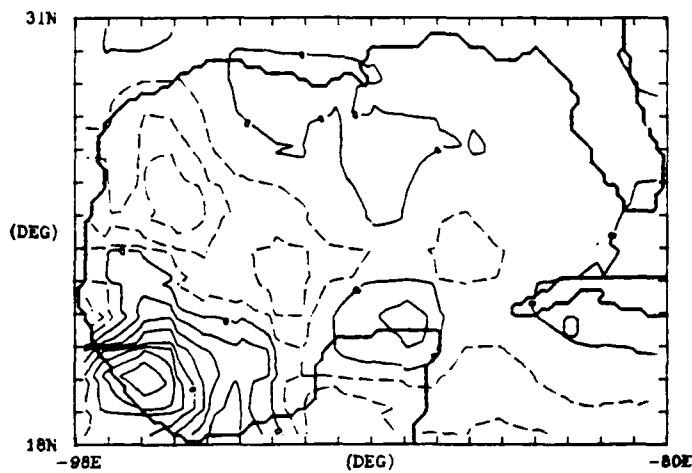


MAXIMUM WIND STRESS = 2.13 DYNES/CM²

NORDA 923 13-DEC-84

WIND STRESS CURL

APRIL/1968 DC = 2.0E-07 MKS



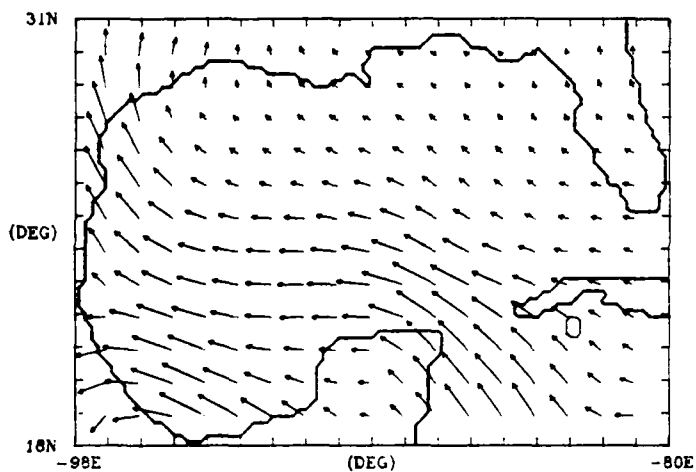
MIN = -7.40E-07 MAX = 1.59E-06

NORDA 923 13-DEC-84

WIND STRESS

MAY/1968

10

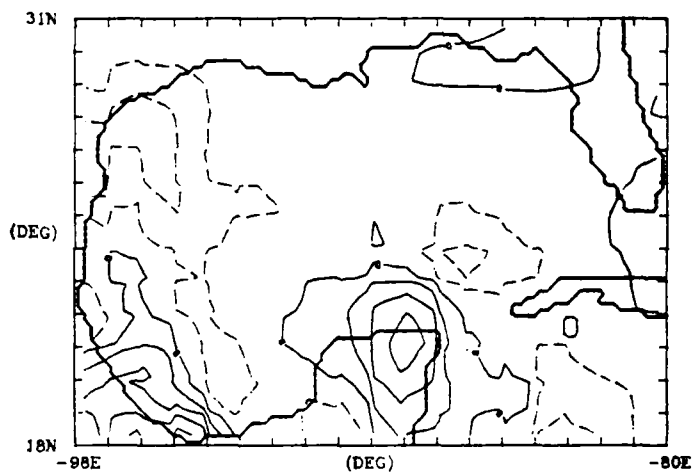


MAXIMUM WIND STRESS = 1.25 DYNES/CM²

NORDA 923 13-DEC-84

WIND STRESS CURL

MAY/1968 DC = 2.0E-07 MKS



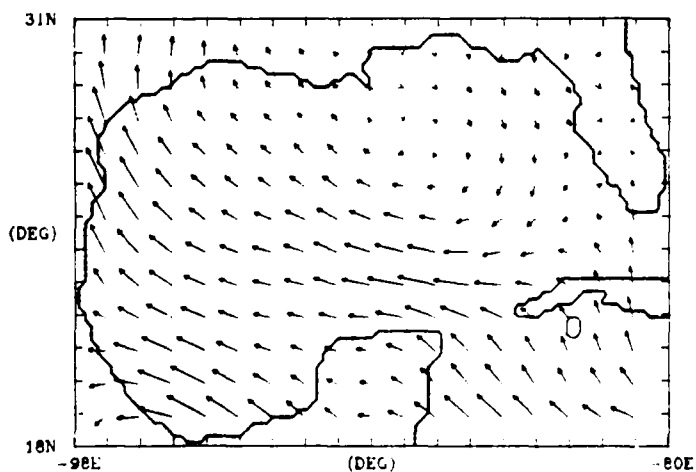
MIN = -5.99E-07 MAX = 9.06E-07

NORDA 923 13-DEC-84

WIND STRESS

JUNE/1968

10

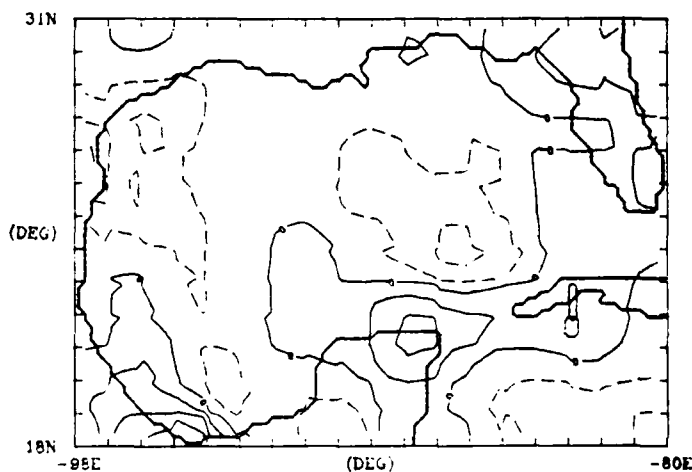


MAXIMUM WIND STRESS = 1.06 DYNES/CM²

NORDA 923 13-DEC-84

WIND STRESS CURL

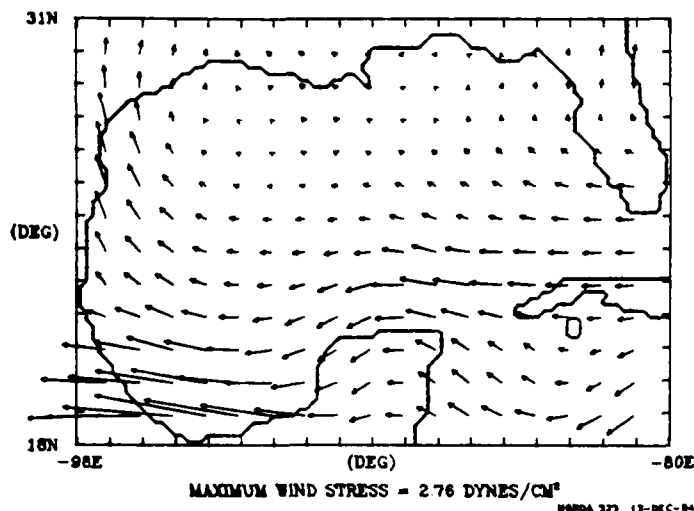
JUNE/1968 DC = 2.0E-07 MKS



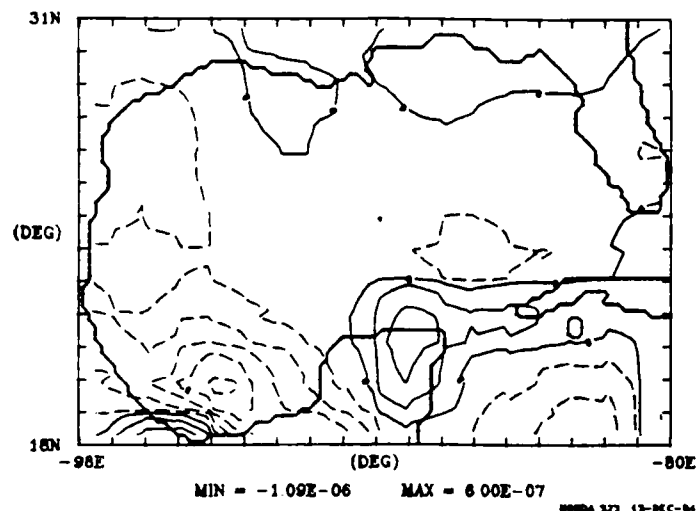
MIN = -6.27E-07 MAX = 7.81E-07

NORDA 923 13-DEC-84

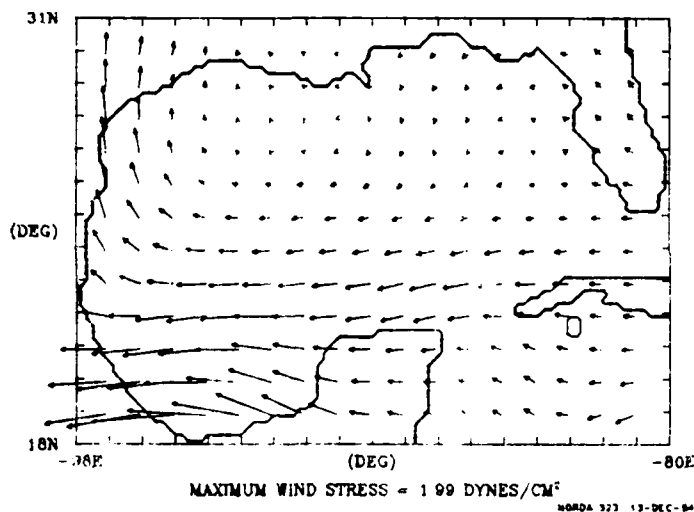
WIND STRESS
JULY/1968



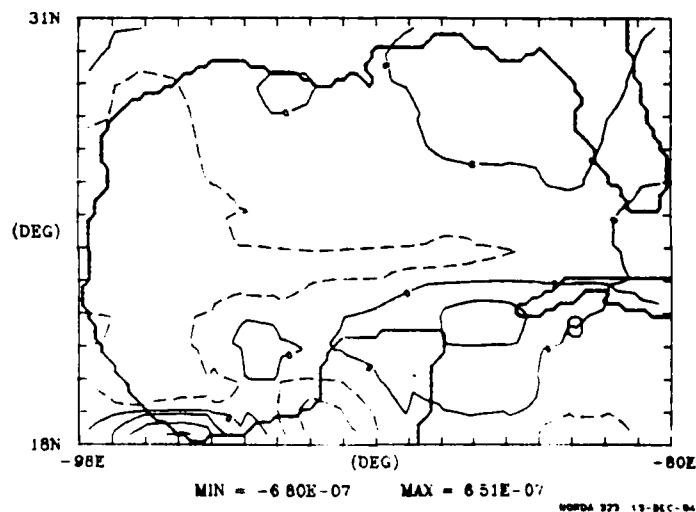
WIND STRESS CURL
JULY/1968 DC = 2.0E-07 MKS



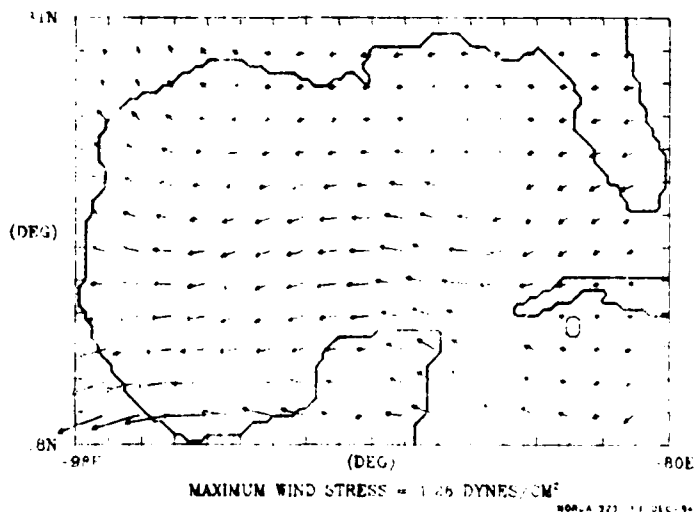
WIND STRESS
AUGUST/1968



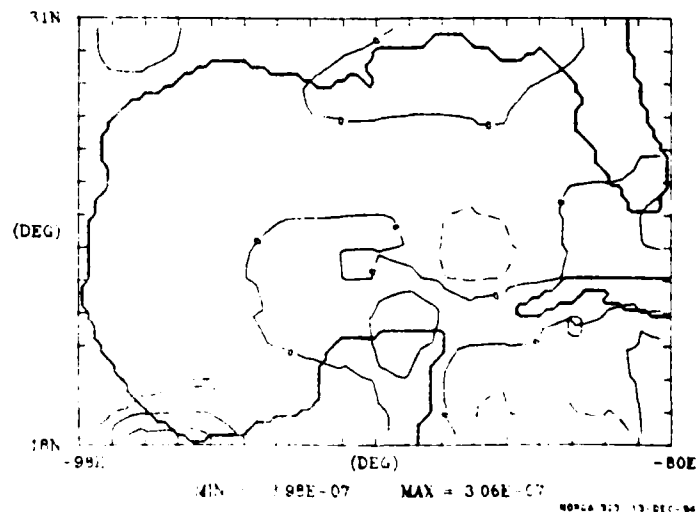
WIND STRESS CURL
AUGUST/1968 DC = 2.0E-07 MKS



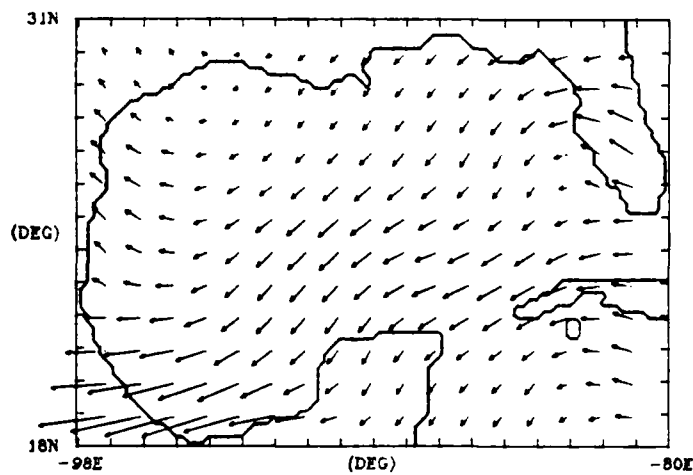
WIND STRESS
SEPTEMBER/1968



WIND STRESS CURL
SEPTEMBER/1968 DC = 2.0E-07 MKS



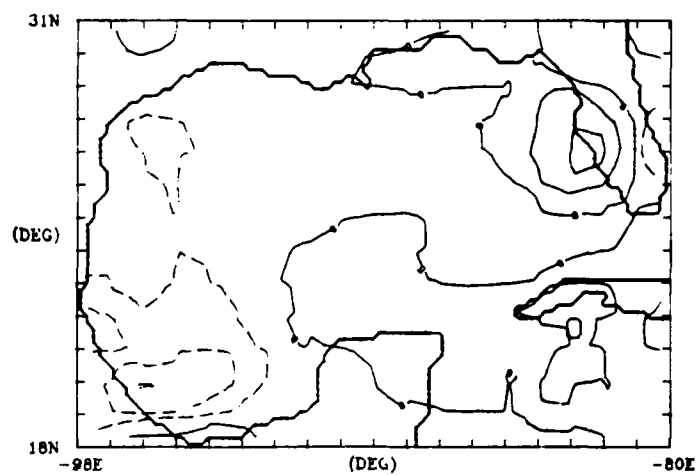
WIND STRESS
OCTOBER/1968



MAXIMUM WIND STRESS = 1.76 DYNES/CM²

NOIDA 323 13-DEC-84

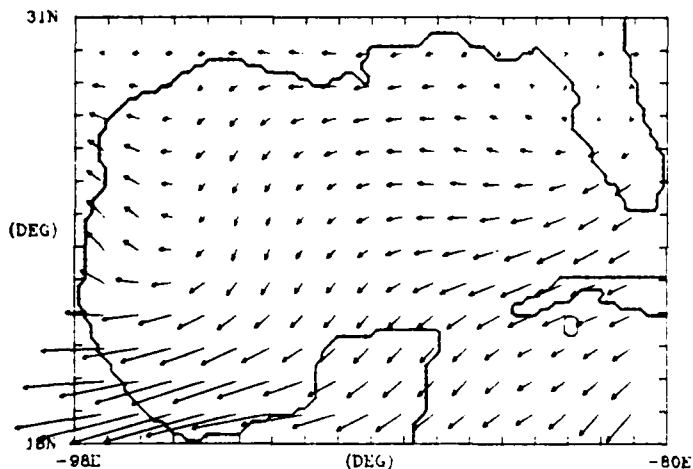
WIND STRESS CURL
OCTOBER/1968 DC = 2.0E-07 MKS



MIN = -6.14E-07 MAX = 5.08E-07

NOIDA 323 13-DEC-84

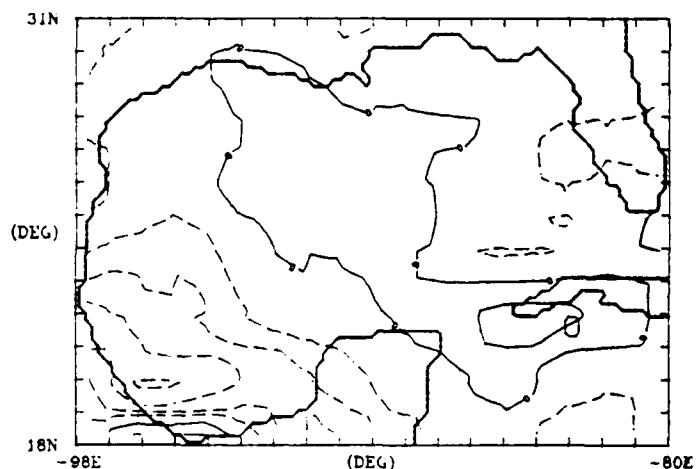
WIND STRESS
NOVEMBER/1968



MAXIMUM WIND STRESS = 2.60 DYNES/CM²

NOIDA 323 13-DEC-84

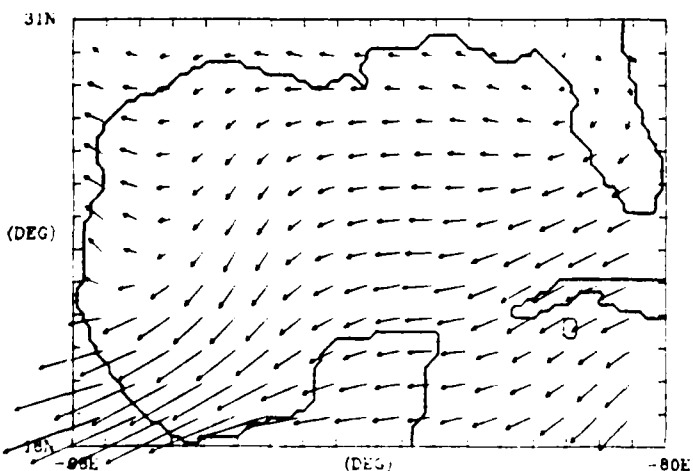
WIND STRESS CURL
NOVEMBER/1968 DC = 2.0E-07 MKS



MIN = -8.56E-07 MAX = 2.84E-07

NOIDA 323 13-DEC-84

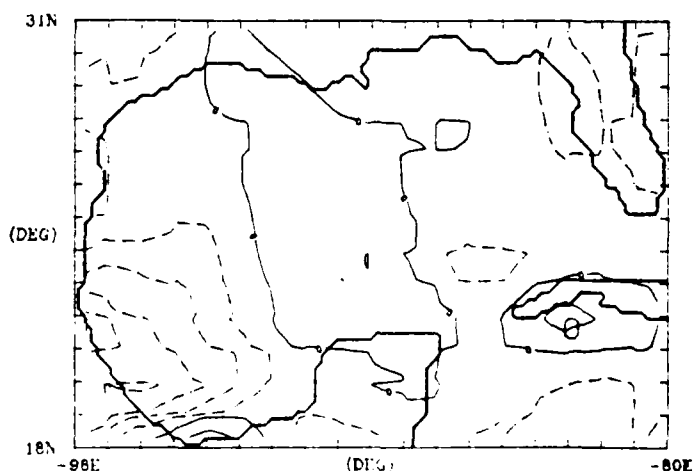
WIND STRESS
DECEMBER/1968



MAXIMUM WIND STRESS = 2.82 DYNES/CM²

NOIDA 323 13-DEC-84

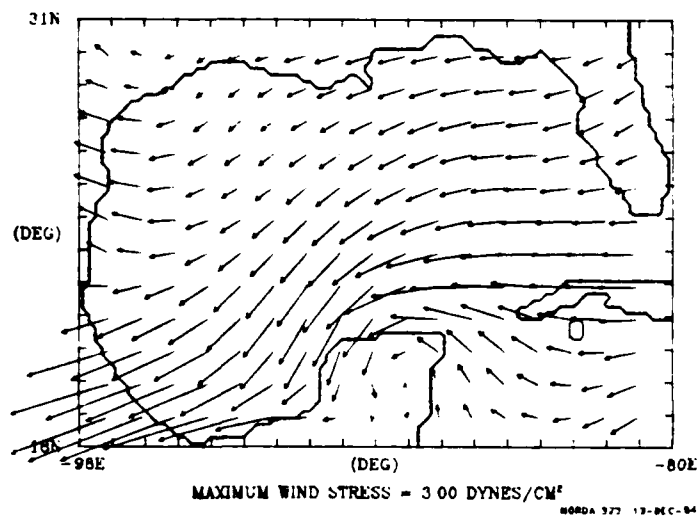
WIND STRESS CURL
DECEMBER/1968 DC = 2.0E-07 MKS



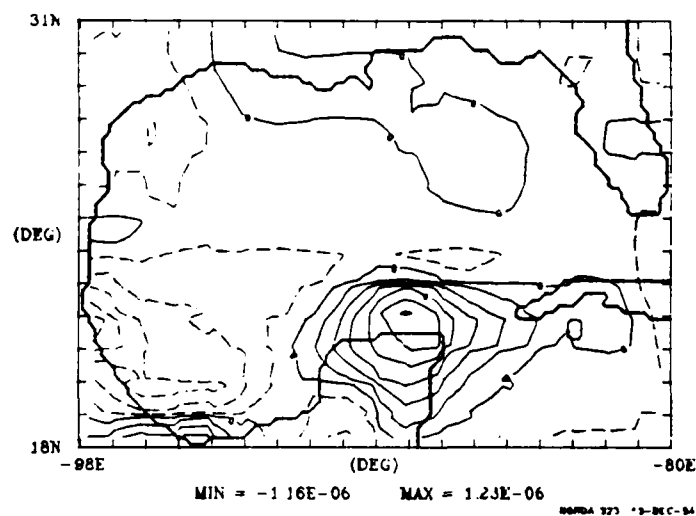
MIN = -1.02E-06 MAX = 2.82E-07

NOIDA 323 13-DEC-84

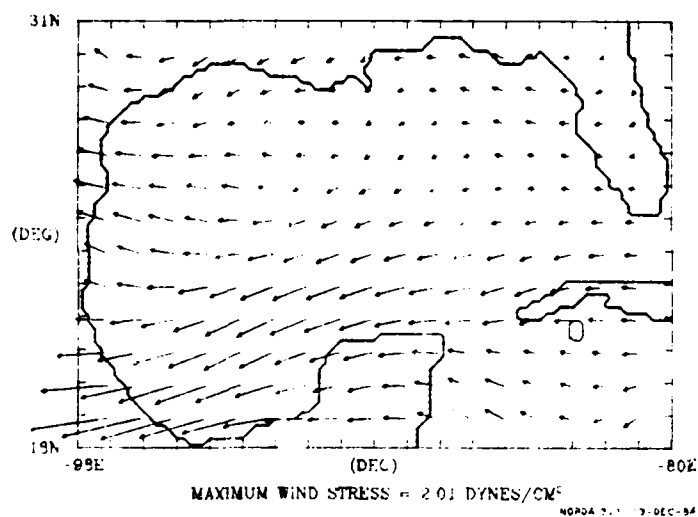
WIND STRESS
JANUARY/1969



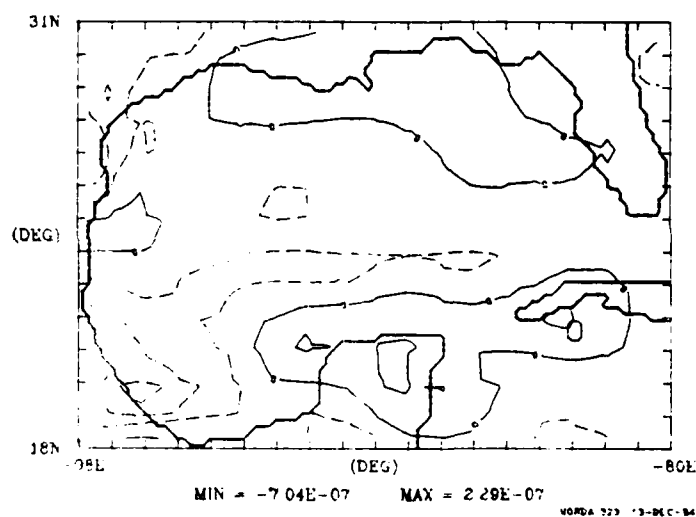
WIND STRESS CURL
JANUARY/1969 DC = 2.0E-07 MKS



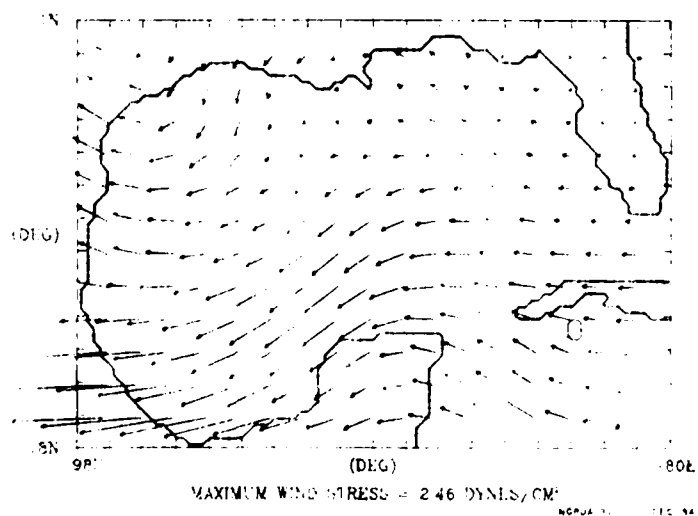
WIND STRESS
FEBRUARY/1969



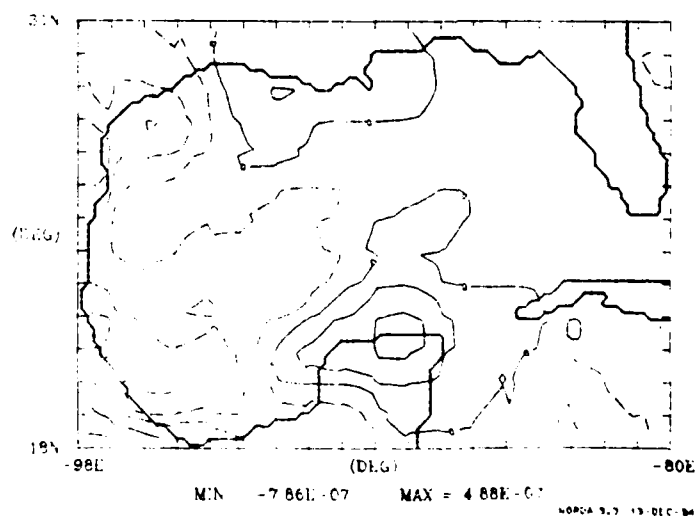
WIND STRESS CURL
FEBRUARY/1969 DC = 2.0E-07 MKS



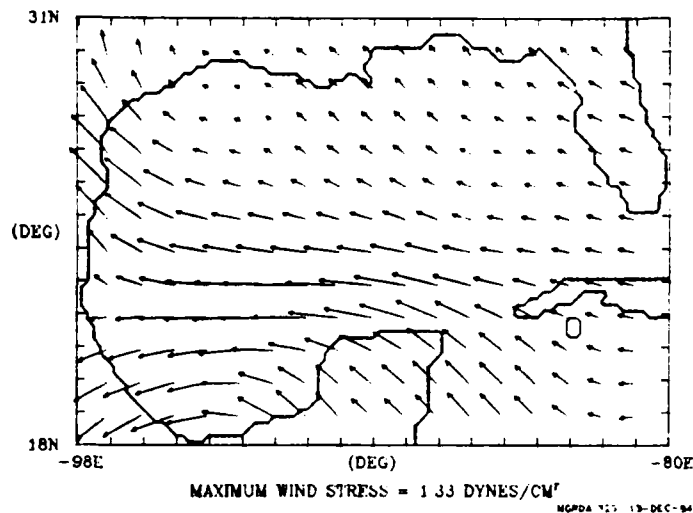
WIND STRESS
MARCH/1969



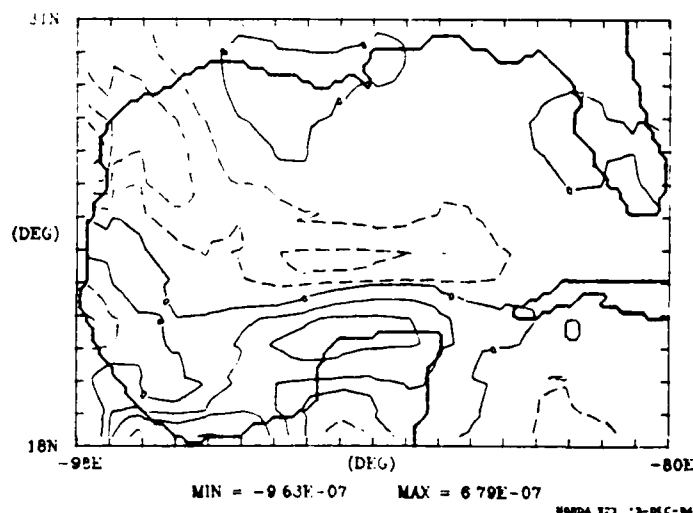
WIND STRESS CURL
MARCH/1969 DC = 2.0E-07 MKS



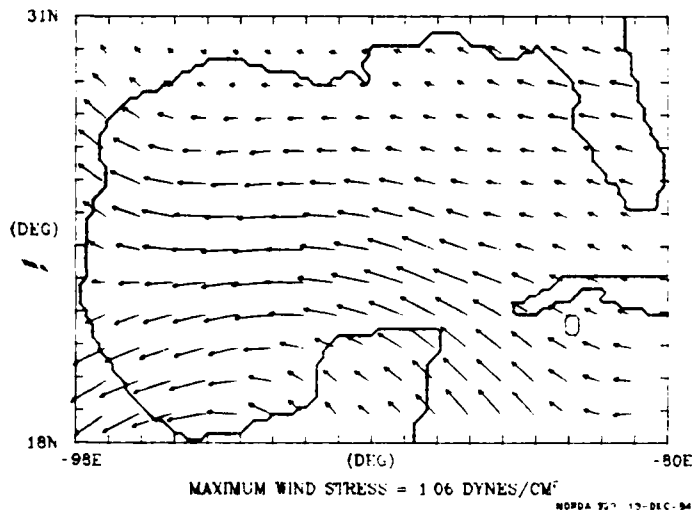
WIND STRESS
APRIL/1969



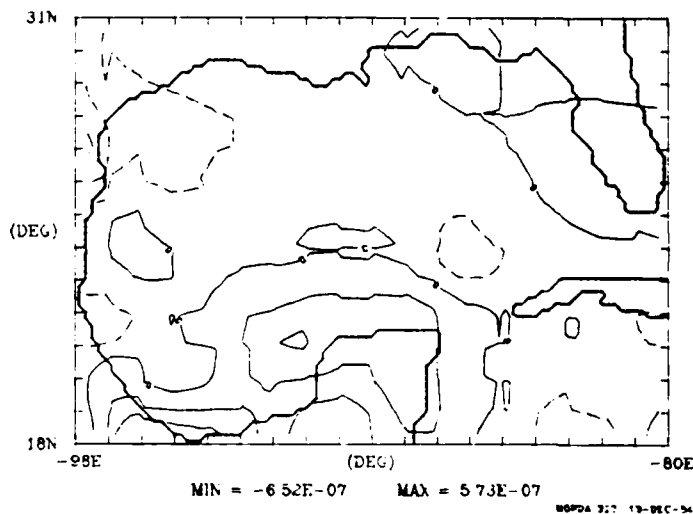
WIND STRESS CURL
APRIL/1969 DC = 2.0E-07 MKS



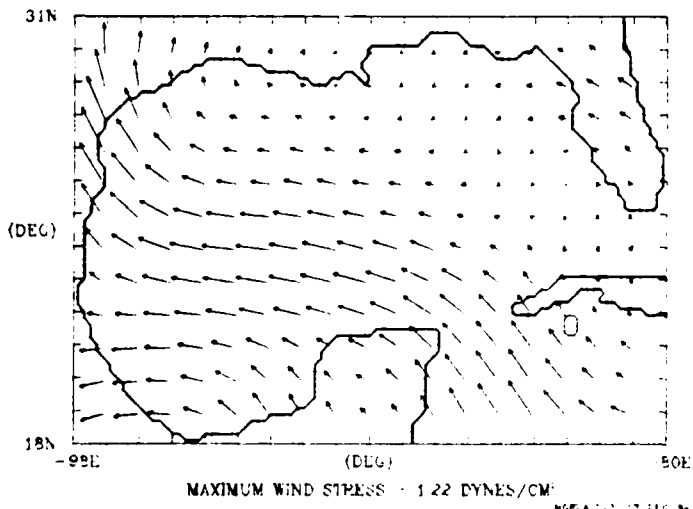
WIND STRESS
MAY/1969



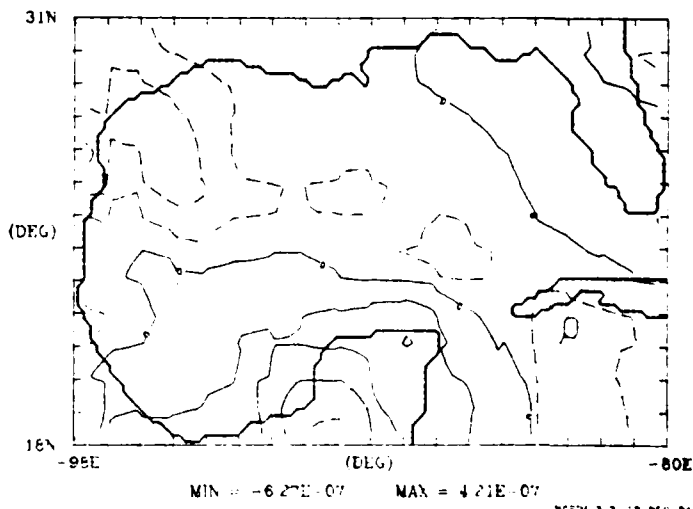
WIND STRESS CURL
MAY/1969 DC = 2.0E-07 MKS



WIND STRESS
JUNE/1969

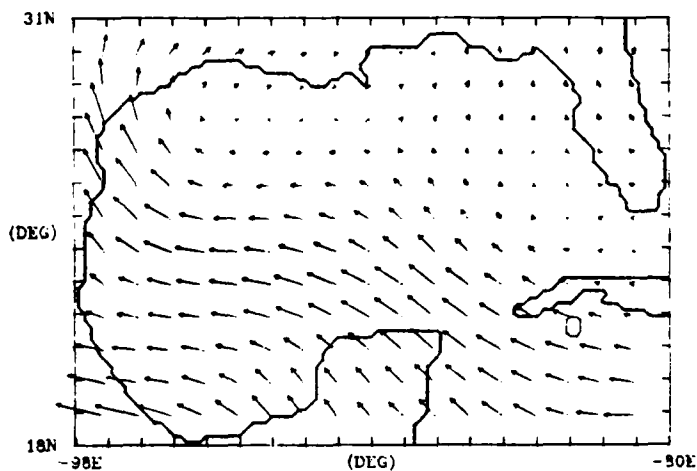


WIND STRESS CURL
JUNE/1969 DC = 2.0E-07 MKS



WIND STRESS

JULY/1969

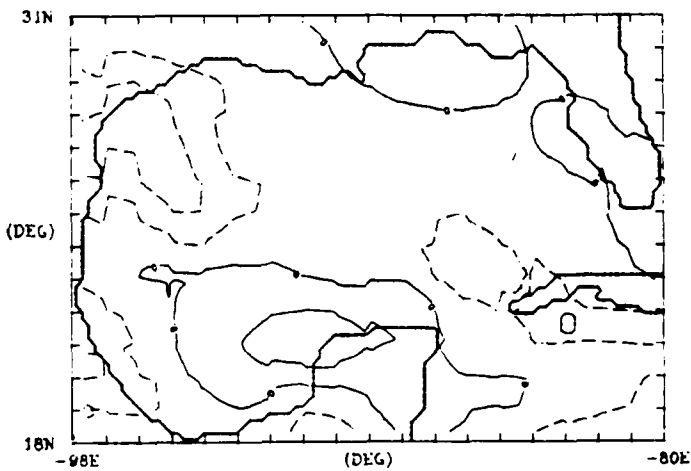


MAXIMUM WIND STRESS = 1.25 DYNES/CM²

NOFPA 777 7-DEC-94

WIND STRESS CURL

JULY/1969 DC = 2.0E-07 MKS

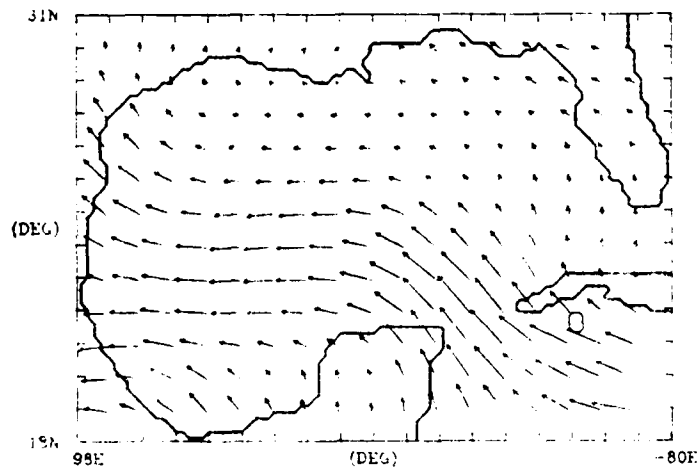


MIN = -5.87E-07 MAX = 3.10E-07

NOFPA 777 7-DEC-94

WIND STRESS

AUGUST/1969

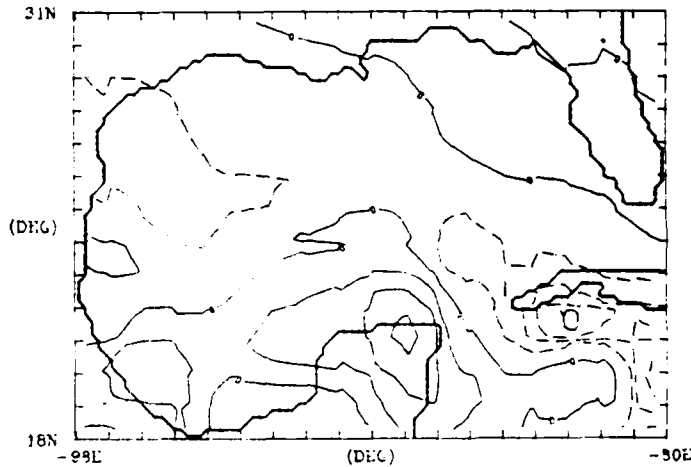


MAXIMUM WIND STRESS = 1.20 DYNES/CM²

NOFPA 777 13-DEC-94

WIND STRESS CURL

AUGUST/1969 DC = 2.0E-07 MKS

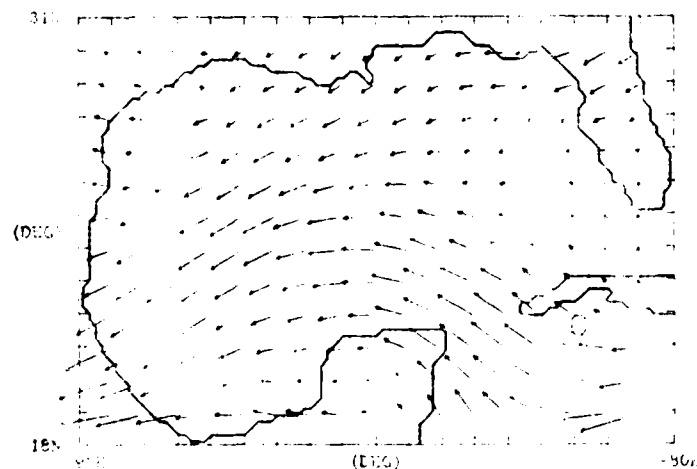


MIN = -5.31E-07 MAX = 6.66E-07

NOFPA 777 13-DEC-94

WIND STRESS

SEPTEMBER/1969

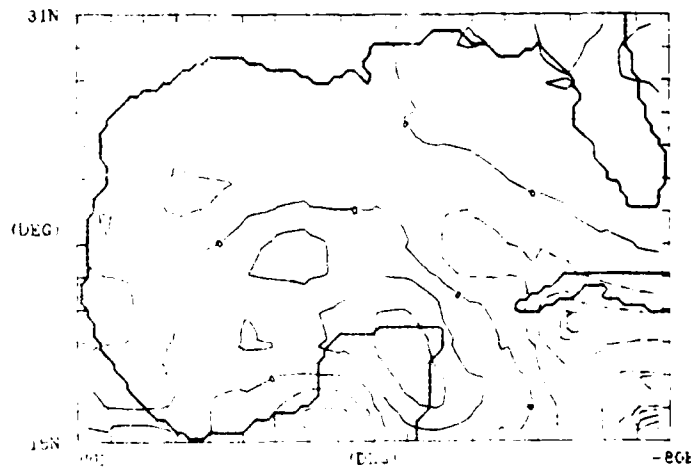


MAXIMUM WIND STRESS = 1.51 DYNES/CM²

NOFPA 777 13-DEC-94

WIND STRESS CURL

SEPTEMBER/1969 DC = 2.0E-07 MKS



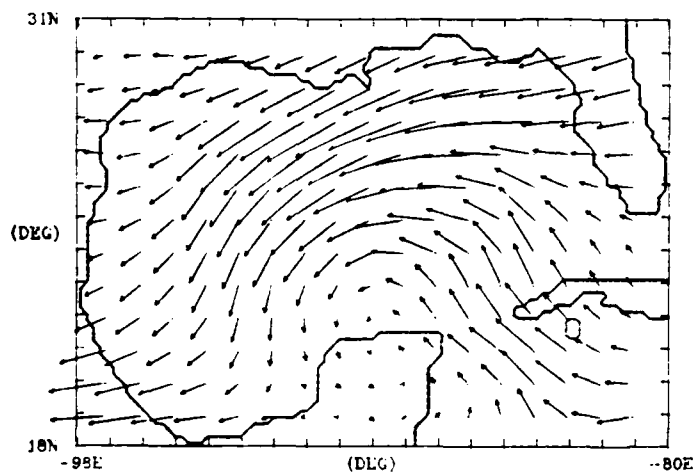
MIN = -7.03E-07 MAX = 5.05E-07

NOFPA 777 13-DEC-94

WIND STRESS

OCTOBER/1969

10

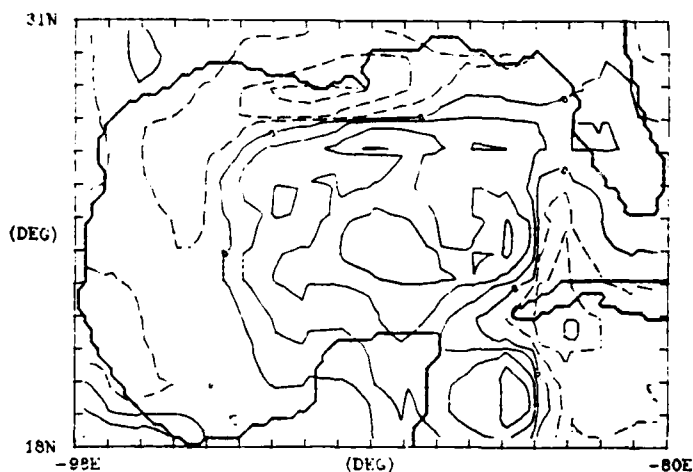


MAXIMUM WIND STRESS = 2.05 DYNES/CM²

NOFPA 927 13-DEC-94

WIND STRESS CURL

OCTOBER/1969 DC = 2.0E-07 MKS



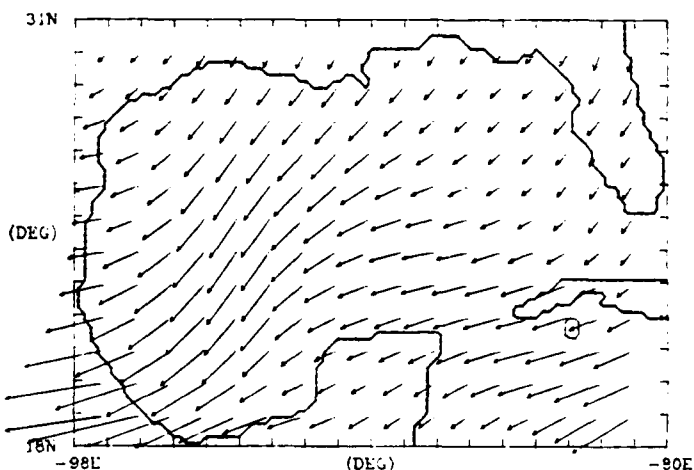
MIN = -7.07E-07 MAX = 7.63E-07

NOFPA 927 13-DEC-94

WIND STRESS

NOVEMBER/1969

10

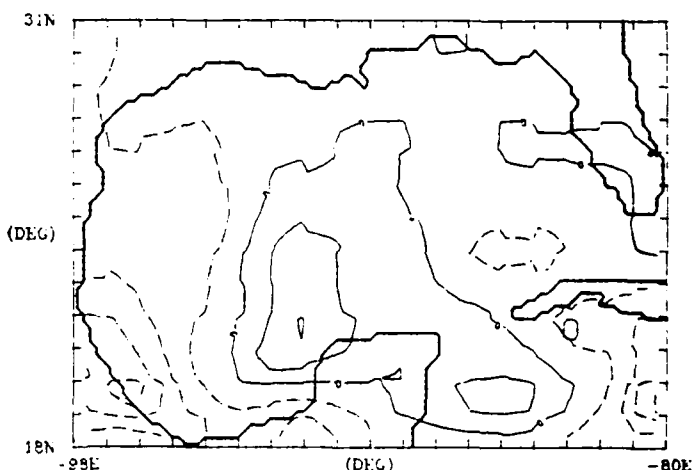


MAXIMUM WIND STRESS = 3.04 DYNES/CM²

NOFPA 927 13-DEC-94

WIND STRESS CURL

NOVEMBER/1969 DC = 2.0E-07 MKS



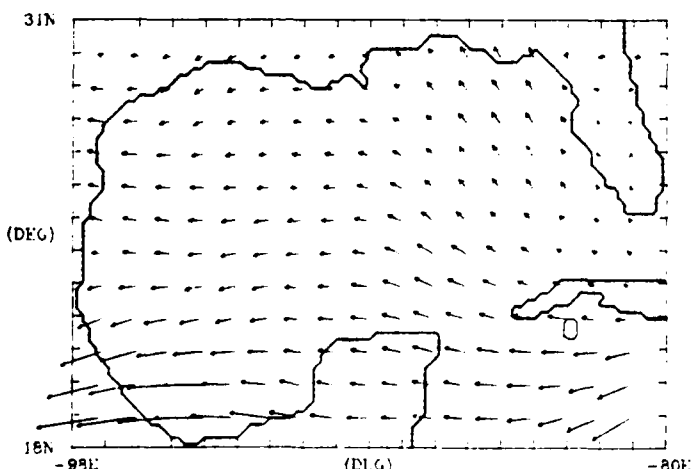
MIN = -8.93E-07 MAX = 4.15E-07

NOFPA 927 13-DEC-94

WIND STRESS

DECEMBER/1969

10

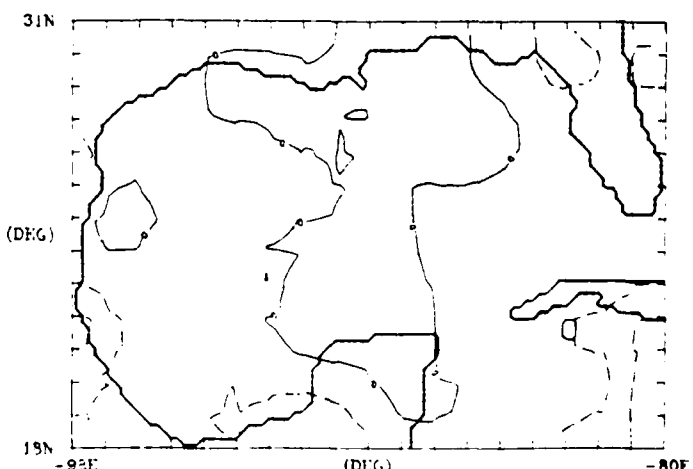


MAXIMUM WIND STRESS = 1.62 DYNES/CM²

NOFPA 927 13-DEC-94

WIND STRESS CURL

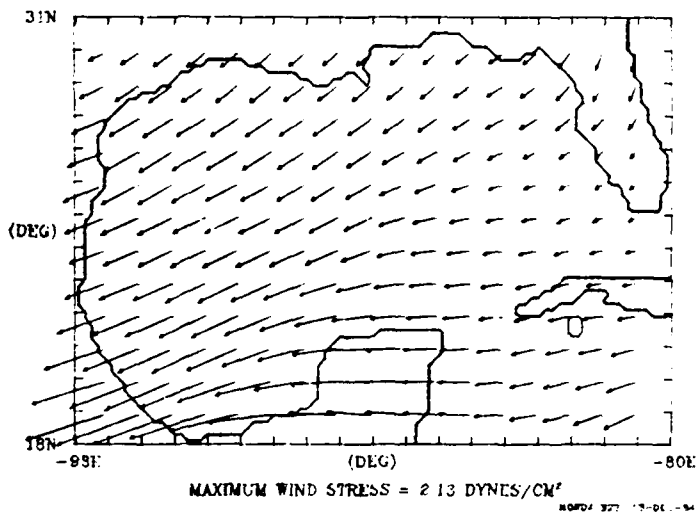
DECEMBER/1969 DC = 2.0E-07 MKS



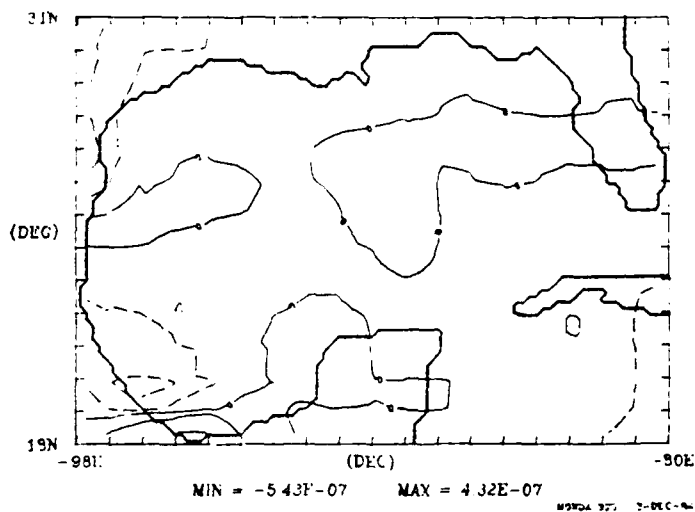
MIN = -5.78E-07 MAX = 7.54E-08

NOFPA 927 13-DEC-94

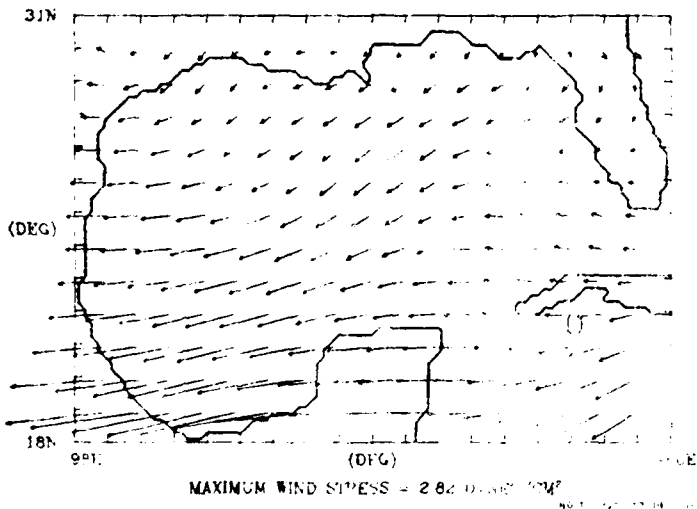
WIND STRESS
JANUARY/1970



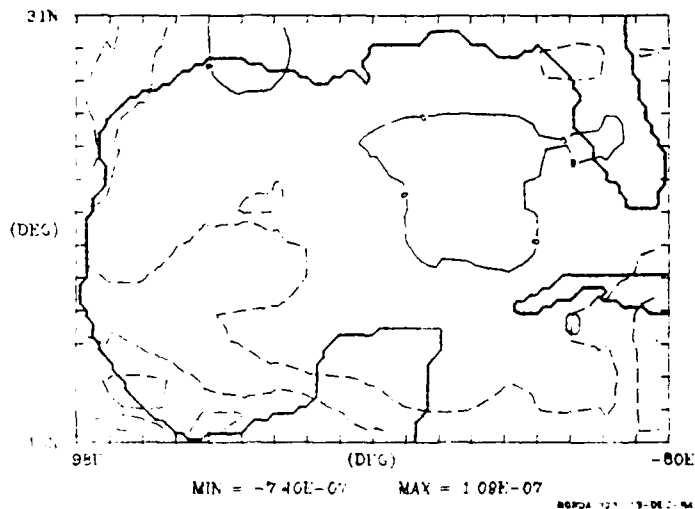
WIND STRESS CURL
JANUARY/1970 DC = 2.0E-07 MKS



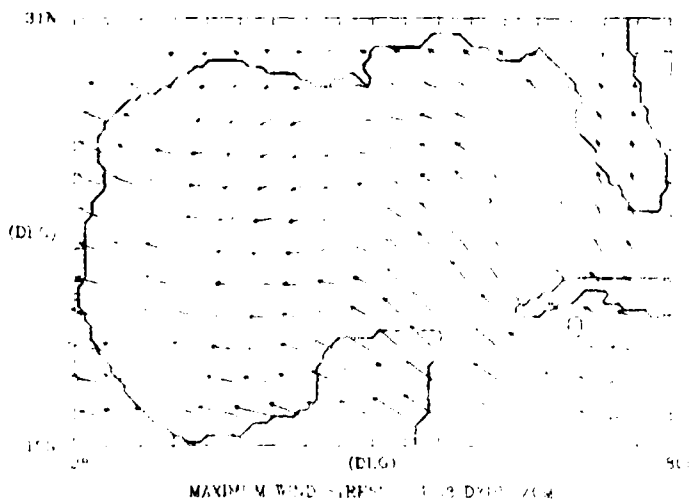
WIND STRESS
FEBRUARY/1970



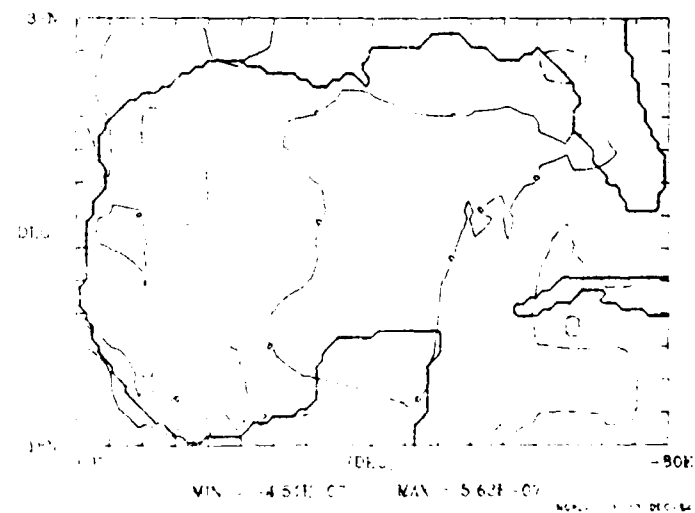
WIND STRESS CURL
FEBRUARY/1970 DC = 2.0E-07 MKS



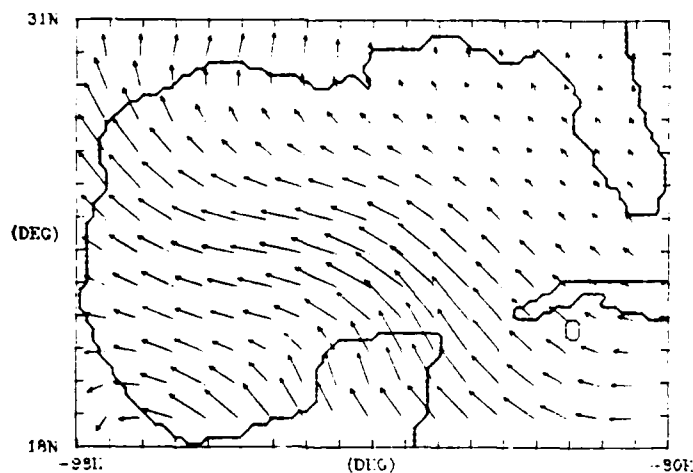
WIND STRESS
MARCH/1970



WIND STRESS CURL
MARCH/1970 DC = 2.0E-07 MKS

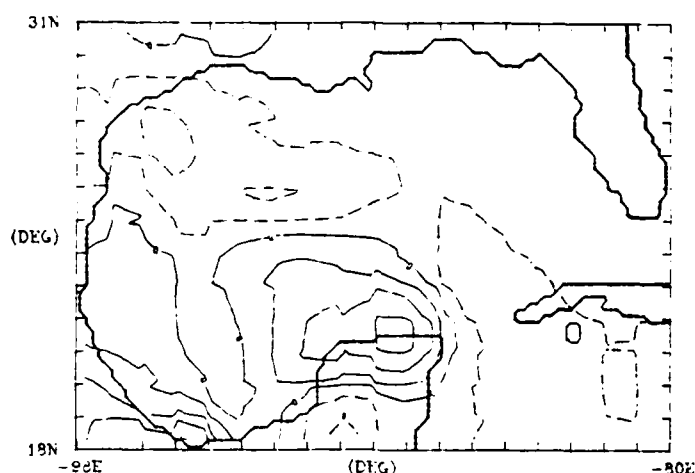


WIND STRESS
APRIL/1970



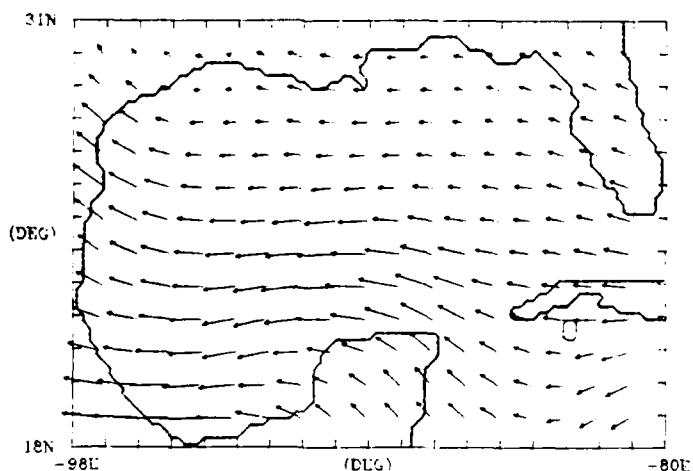
MAXIMUM WIND STRESS = 1.57 DYNES/CM²
NOFPA 577 13-DEC-84

WIND STRESS CURL
APRIL/1970 DC = 2.0E-07 MKS



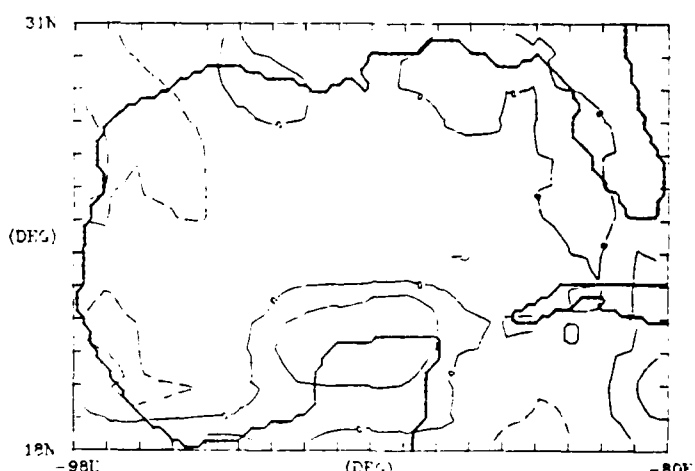
MIN = -4.98E-07 MAX = 8.34E-07
NOFPA 577 13-DEC-84

WIND STRESS
MAY/1970



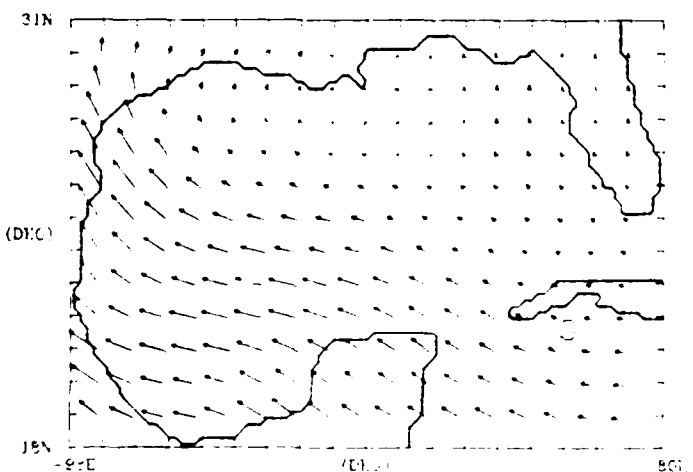
MAXIMUM WIND STRESS = 1.09 DYNES/CM²
NOFPA 577 13-DEC-84

WIND STRESS CURL
MAY/1970 DC = 2.0E-07 MKS



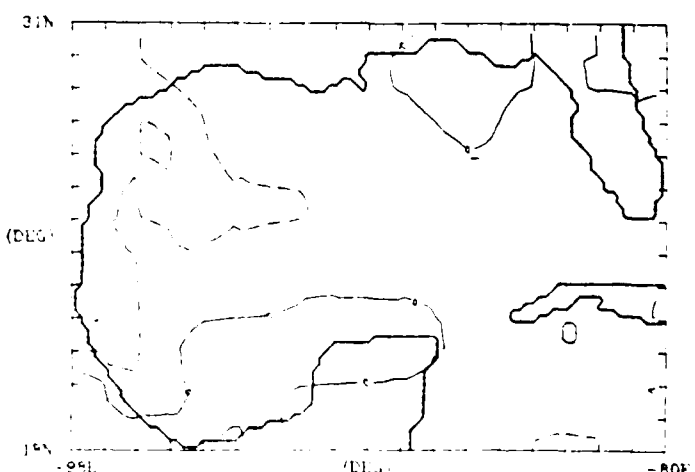
MIN = -5.86E-07 MAX = 4.32E-07
NOFPA 577 13-DEC-84

WIND STRESS
JUNE/1970



MAXIMUM WIND STRESS = 1.05 DYNES/CM²
NOFPA 577 13-DEC-84

WIND STRESS CURL
JUNE/1970 DC = 2.0E-07 MKS

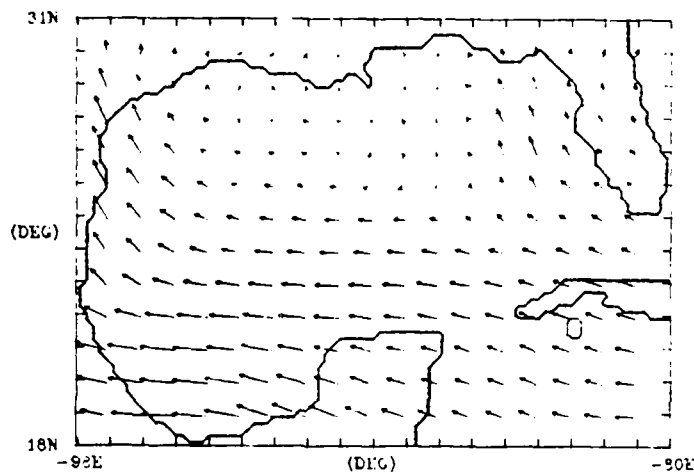


MIN = -5.71E-07 MAX = 2.22E-07
NOFPA 577 13-DEC-84

WIND STRESS

JULY/1970

1E



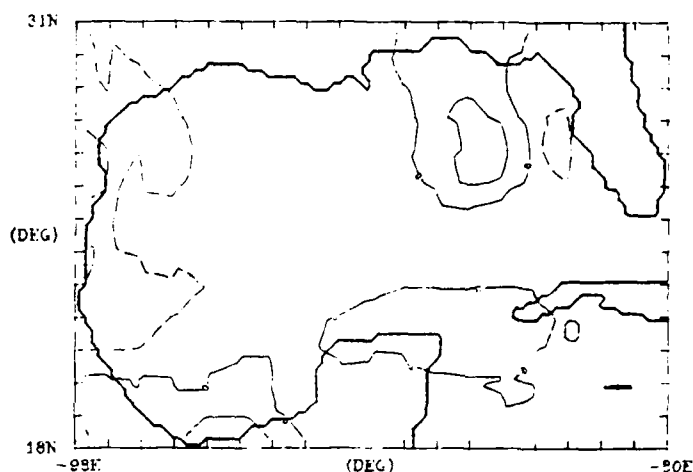
MAXIMUM WIND STRESS = 0.91 DYNES/CM²

NOFPA 777 19-DEC-84

WIND STRESS CURL

JULY/1970

DC = 2.0E-07 MKS



MIN = -4.89E-07

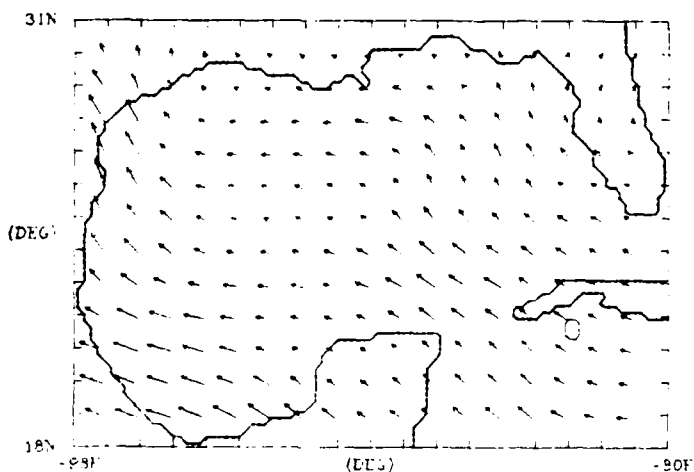
MAX = 3.94E-07

NOFPA 777 19-DEC-84

WIND STRESS

AUGUST/1970

1E



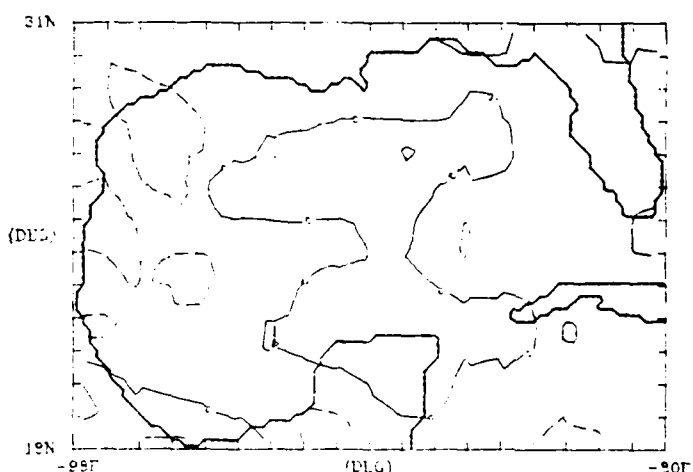
MAXIMUM WIND STRESS = 0.91 DYNES/CM²

NOFPA 777 19-DEC-84

WIND STRESS CURL

AUGUST/1970

DC = 2.0E-07 MKS



MIN = -3.66E-07

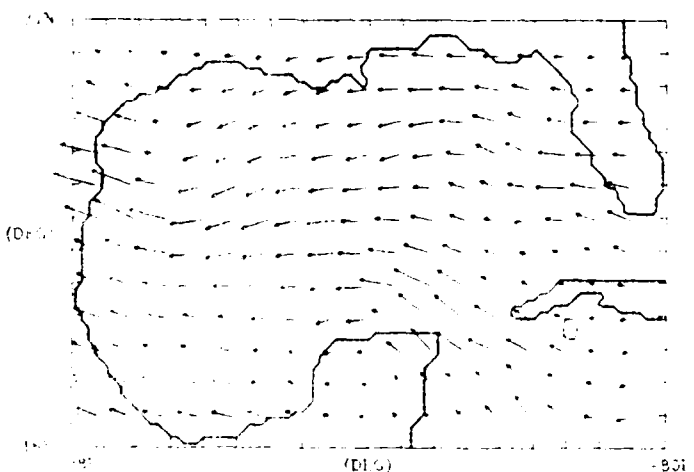
MAX = 2.49E-07

NOFPA 777 19-DEC-84

WIND STRESS

SEPTEMBER/1970

1E



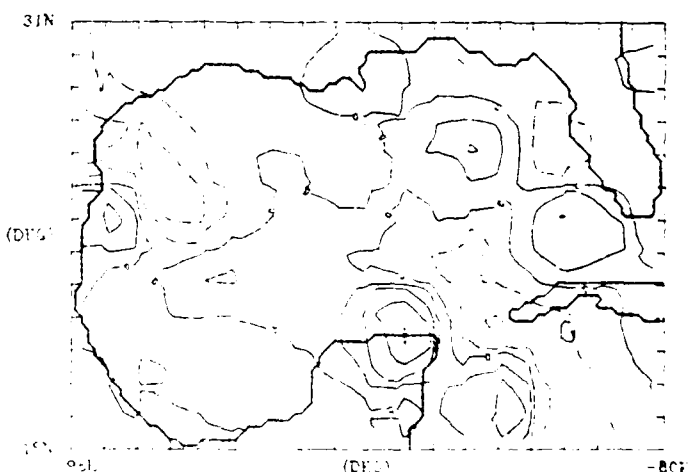
MAXIMUM WIND STRESS = 1.27 DYNES/CM²

NOFPA 777 19-DEC-84

WIND STRESS CURL

SEPTEMBER/1970

DC = 2.0E-07 MKS

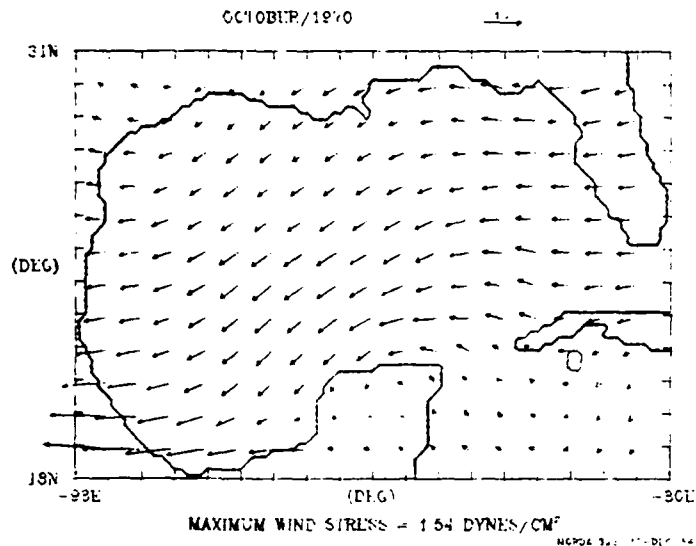


MIN = -6.67E-07

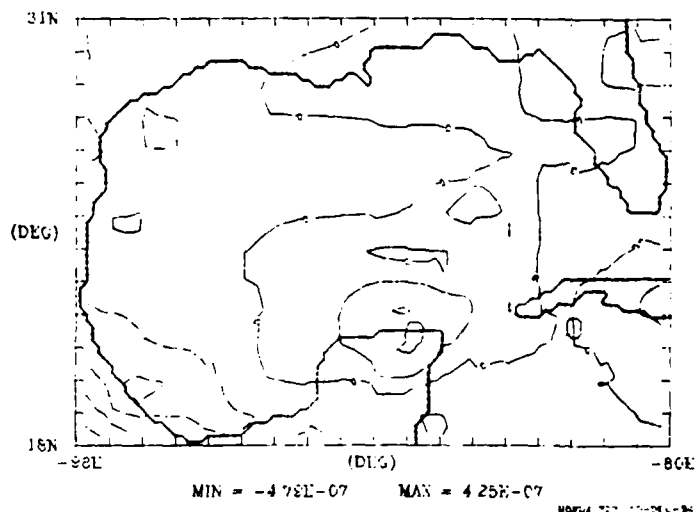
MAX = 8.17E-07

NOFPA 777 19-DEC-84

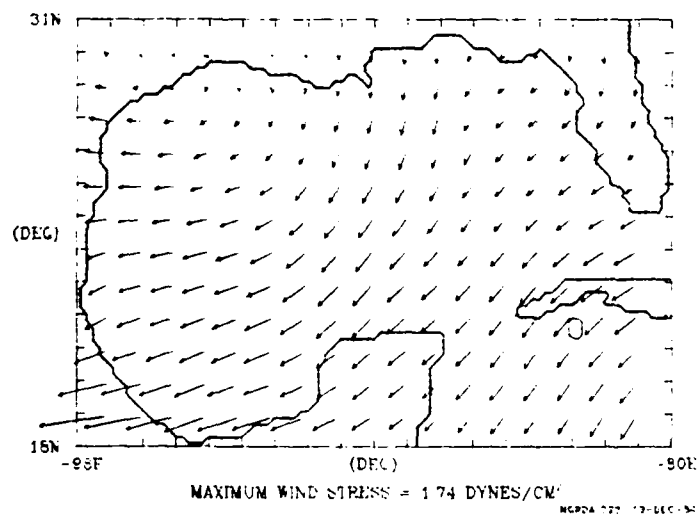
WIND STRESS
OCTOBER/1970



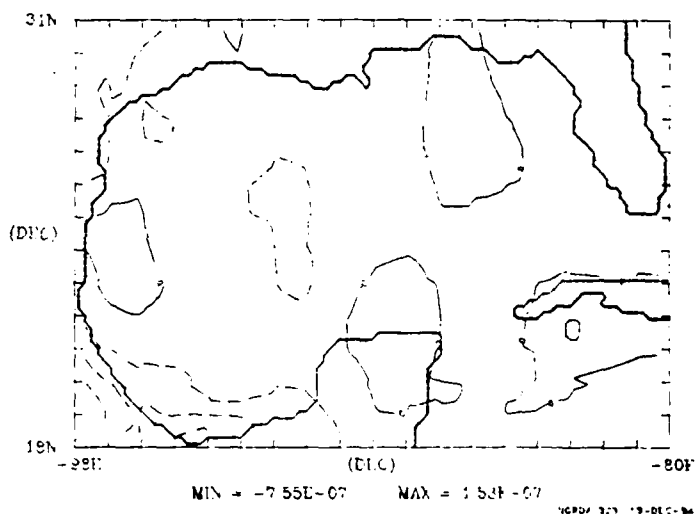
WIND STRESS CURL
OCTOBER/1970 DC = 2.0E-07 MKS



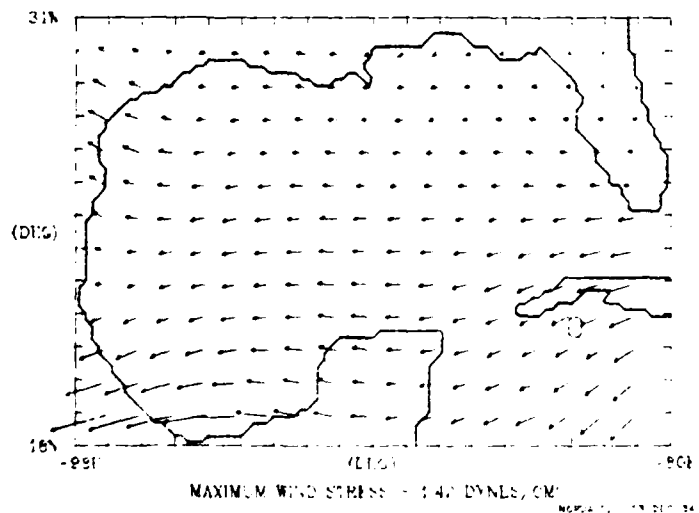
WIND STRESS
NOVEMBER/1970



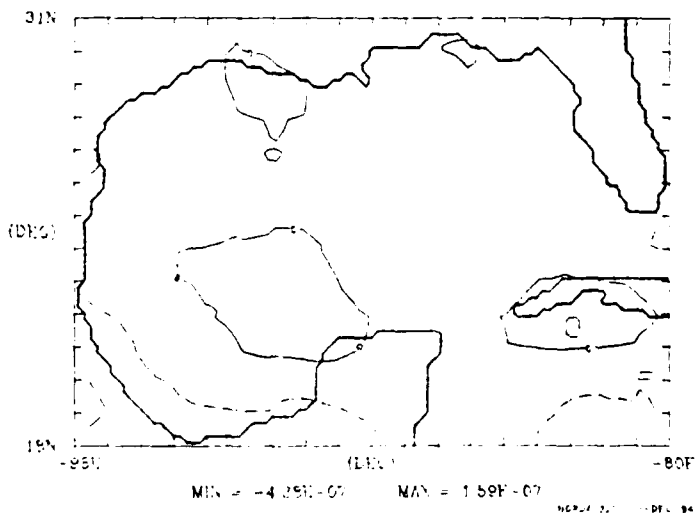
WIND STRESS CURL
NOVEMBER/1970 DC = 2.0E-07 MKS



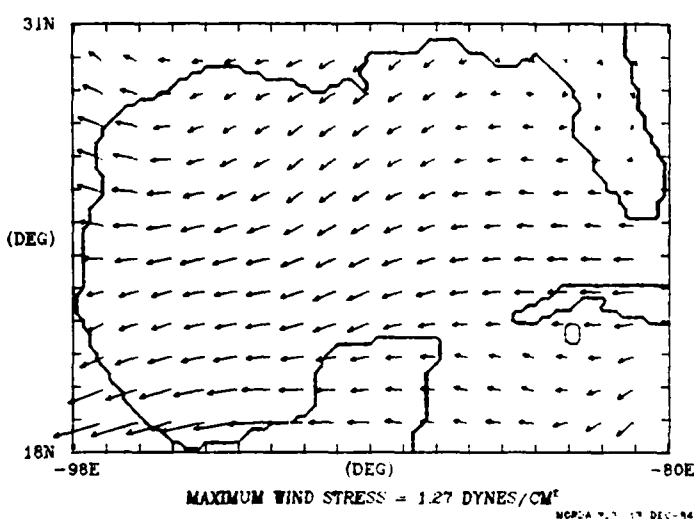
WIND STRESS
DECEMBER/1970



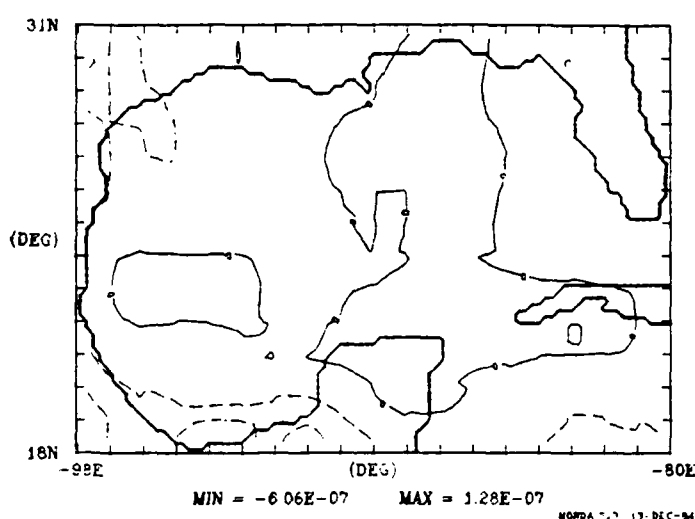
WIND STRESS CURL
DECEMBER/1970 DC = 2.0E-07 MKS



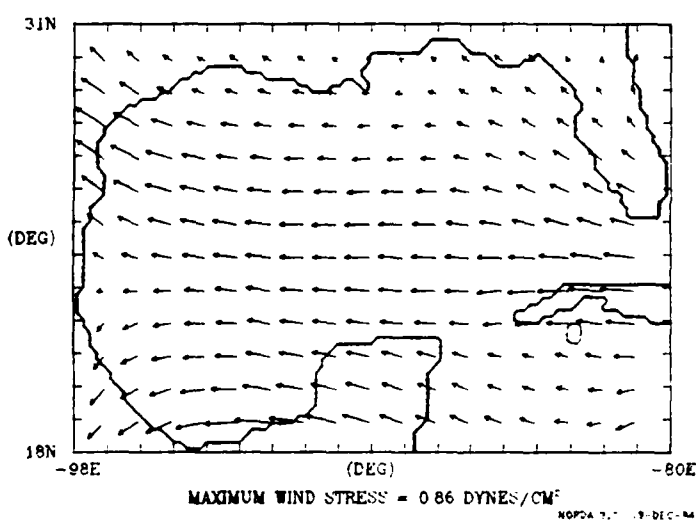
WIND STRESS
JANUARY/1971



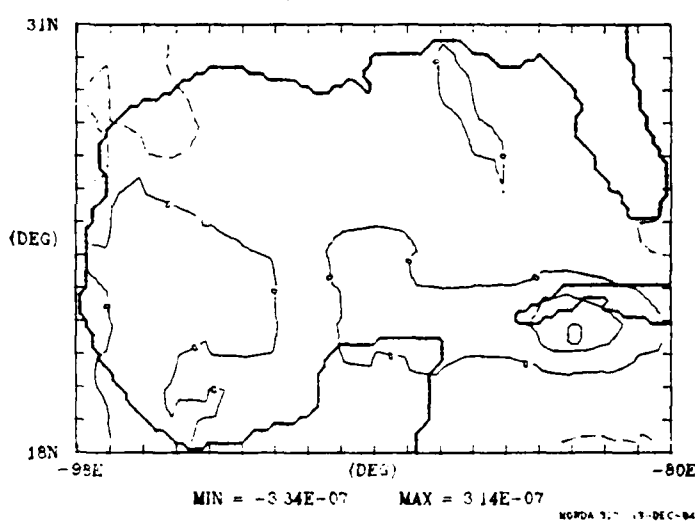
WIND STRESS CURL
JANUARY/1971 DC = 2.0E-07 MKS



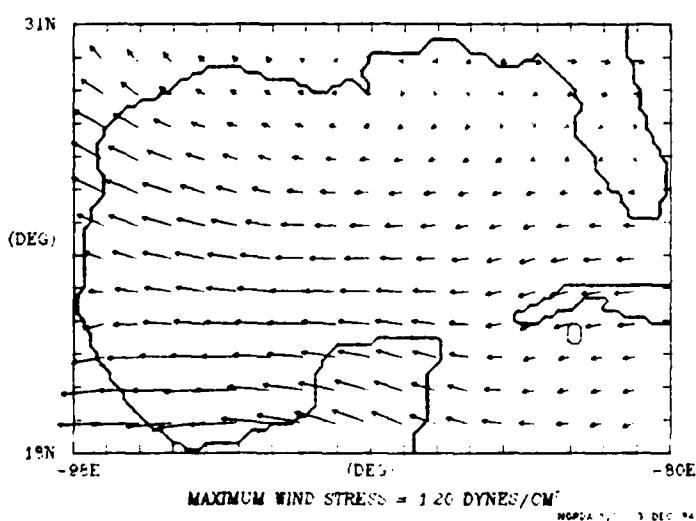
WIND STRESS
FEBRUARY/1971



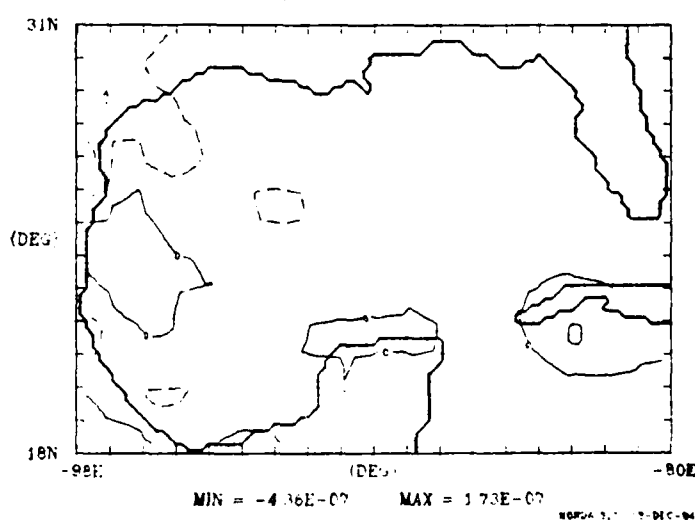
WIND STRESS CURL
FEBRUARY/1971 DC = 2.0E-07 MKS



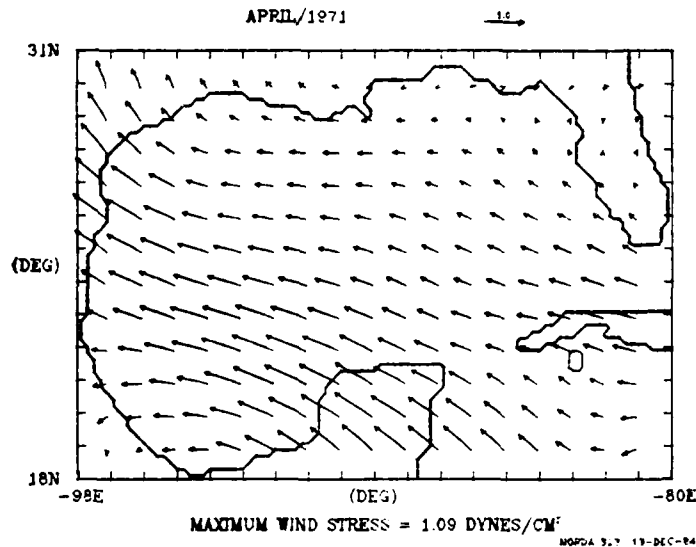
WIND STRESS
MARCH/1971



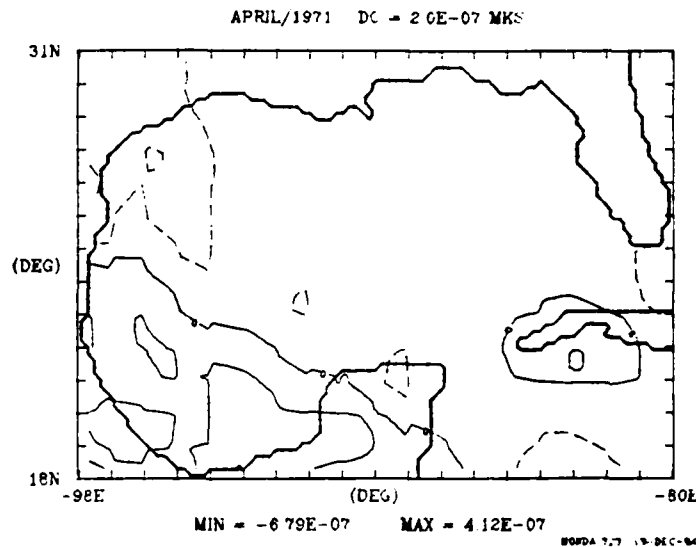
WIND STRESS CURL
MARCH/1971 DC = 2.0E-07 MKS



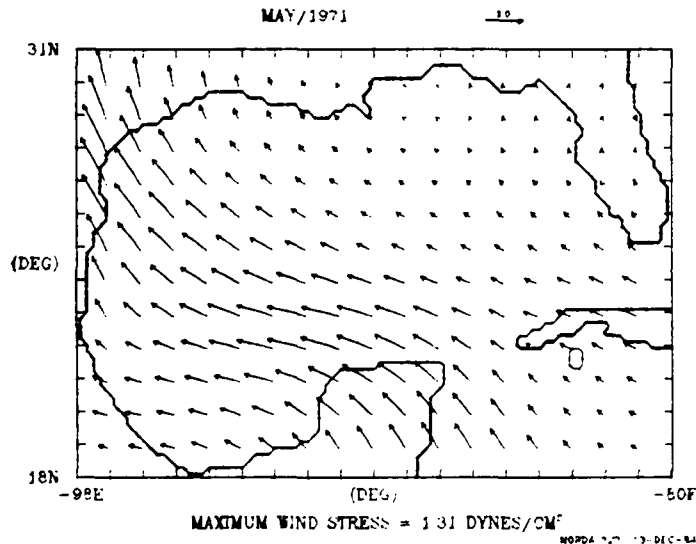
WIND STRESS
APRIL/1971



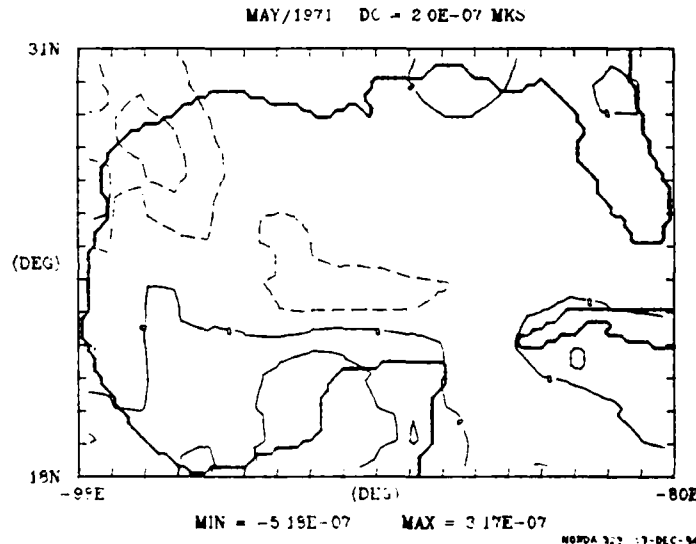
WIND STRESS CURL
APRIL/1971 DC = 2.0E-07 MKS



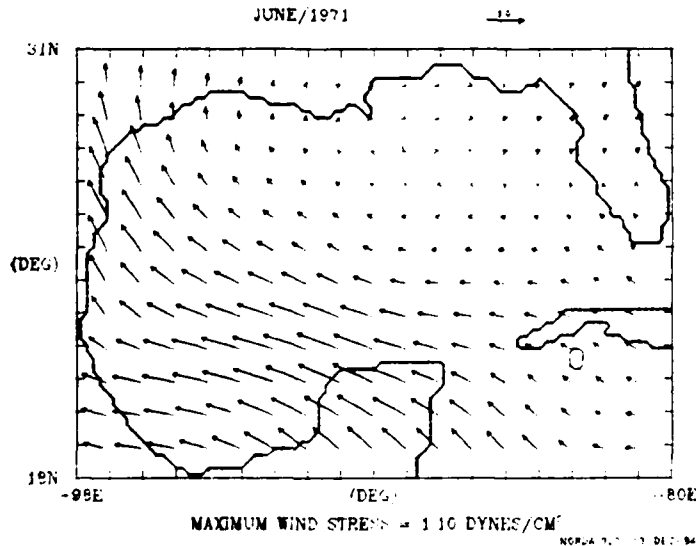
WIND STRESS
MAY/1971



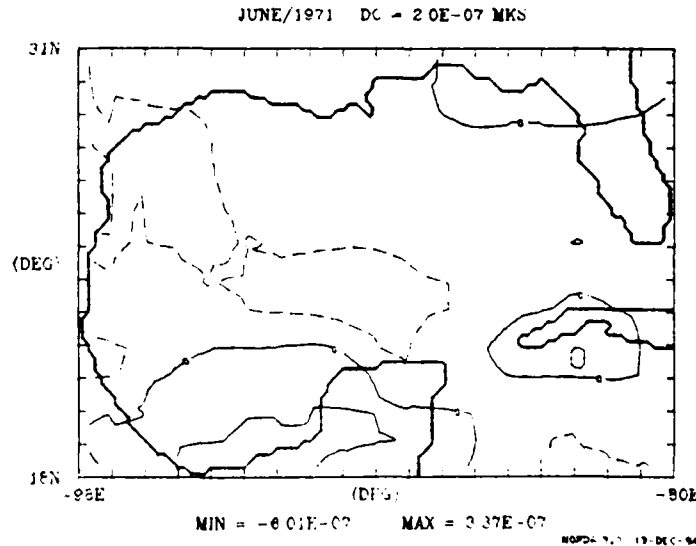
WIND STRESS CURL
MAY/1971 DC = 2.0E-07 MKS



WIND STRESS
JUNE/1971



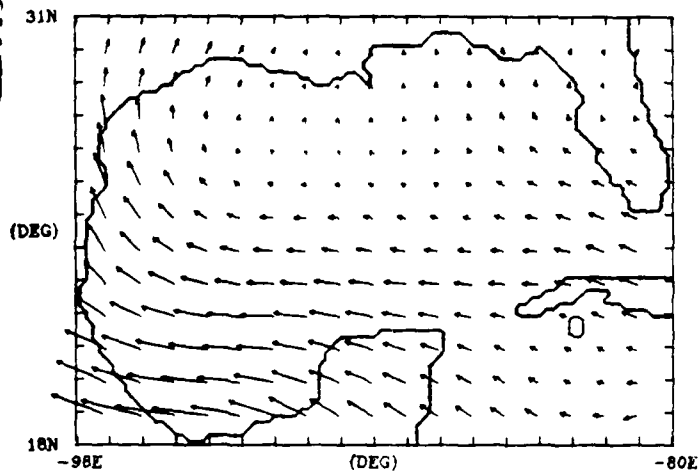
WIND STRESS CURL
JUNE/1971 DC = 2.0E-07 MKS



WIND STRESS

JULY/1971

10

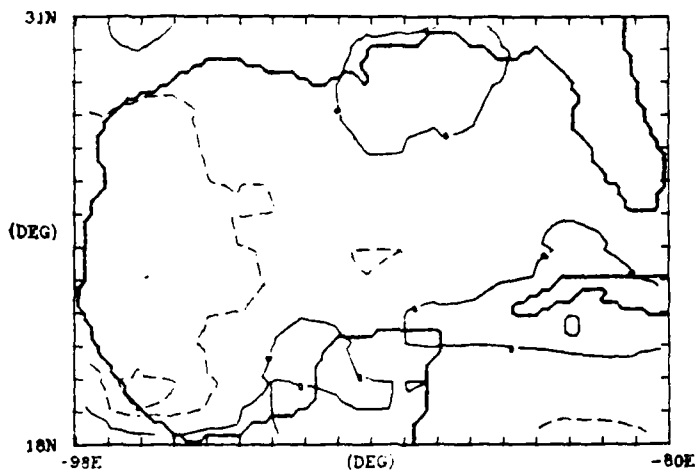


MAXIMUM WIND STRESS = 1.49 DYNES/CM²

NOFPA 927 19-DEC-84

WIND STRESS CURL

JULY/1971 DC = 2.0E-07 MKS



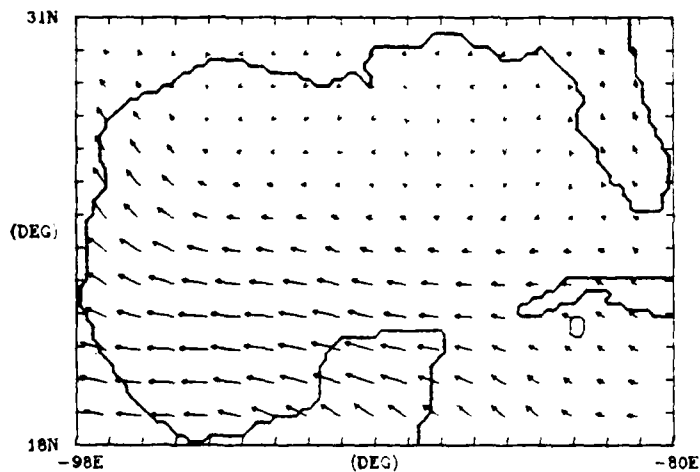
MIN = -5.32E-07 MAX = 1.64E-07

NOFPA 927 19-DEC-84

WIND STRESS

AUGUST/1971

10

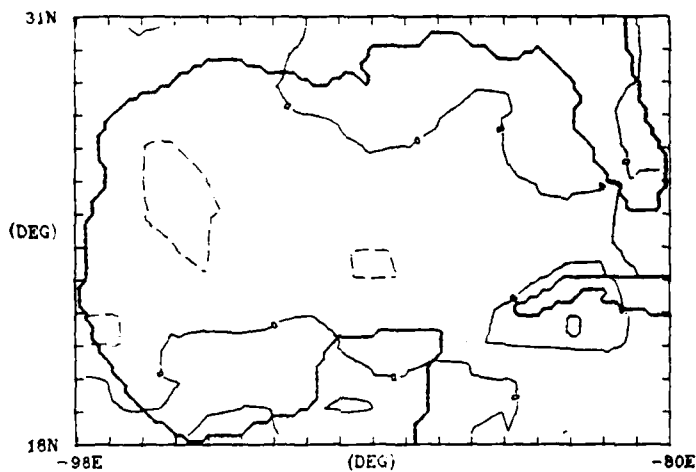


MAXIMUM WIND STRESS = 0.72 DYNES/CM²

NOFPA 927 19-DEC-84

WIND STRESS CURL

AUGUST/1971 DC = 2.0E-07 MKS



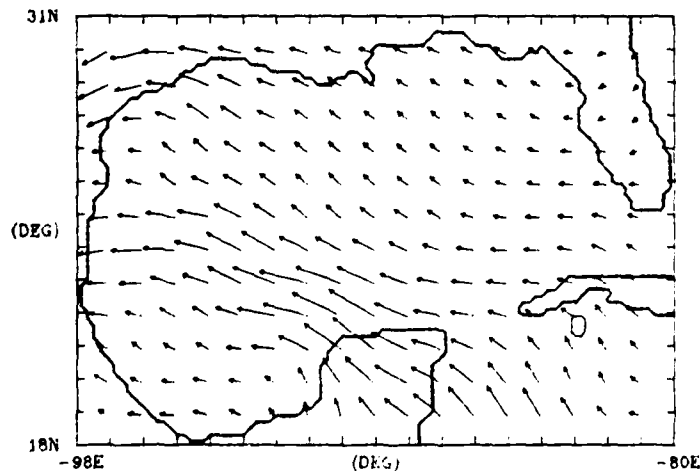
MIN = -2.78E-07 MAX = 2.37E-07

NOFPA 927 19-DEC-84

WIND STRESS

SEPTEMBER/1971

10

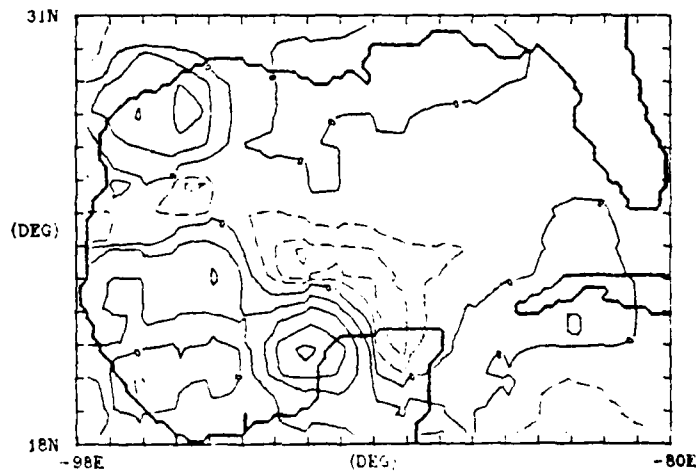


MAXIMUM WIND STRESS = 1.32 DYNES/CM²

NOFPA 927 19-DEC-84

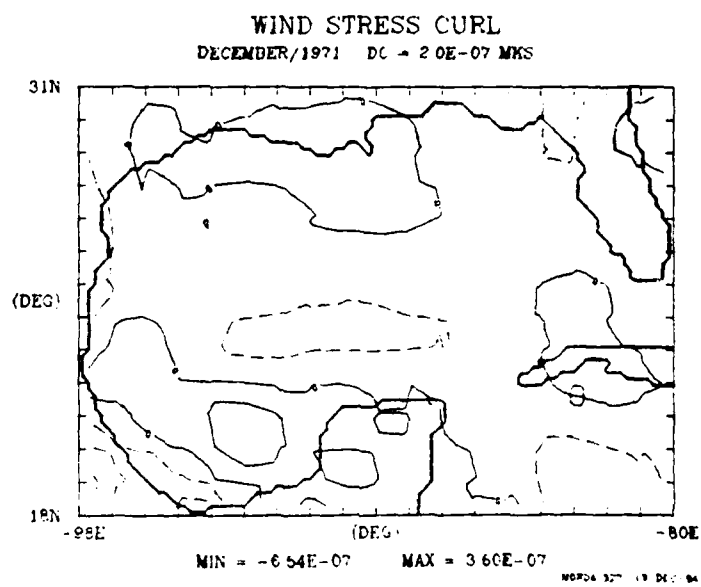
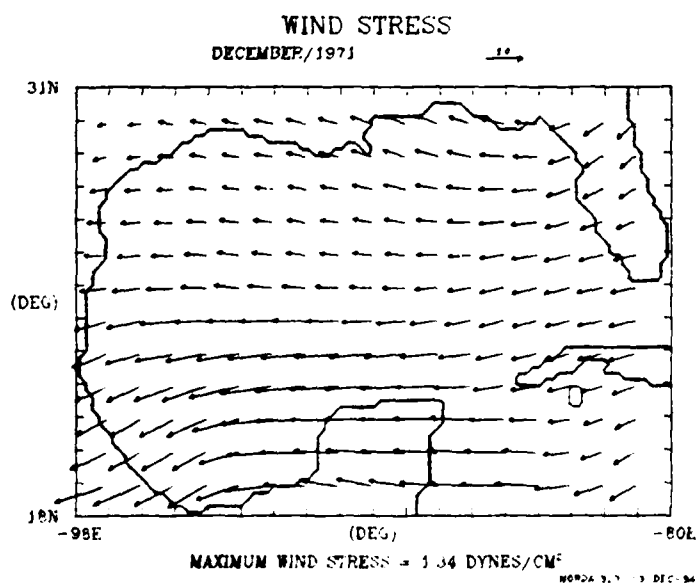
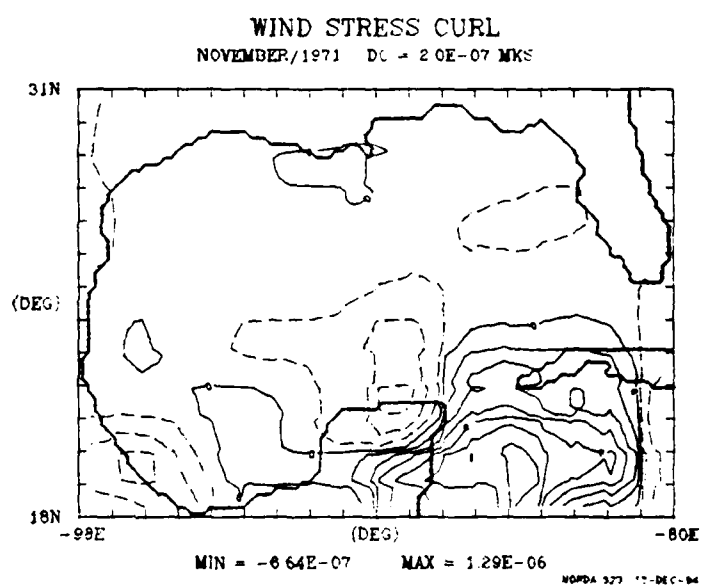
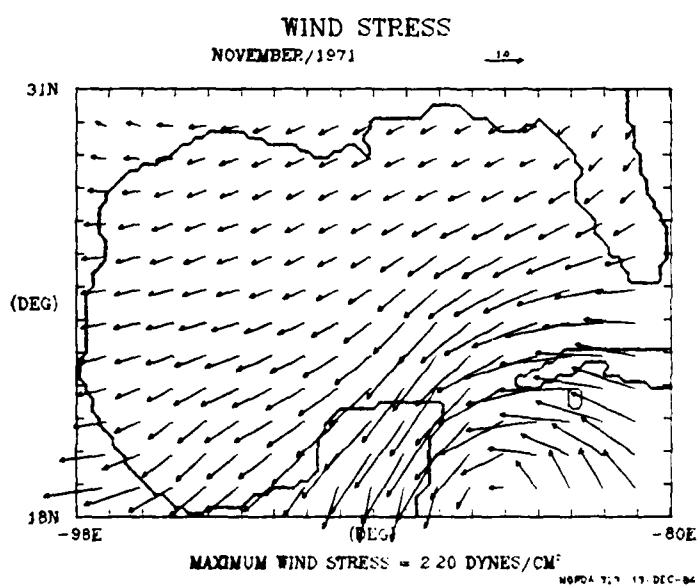
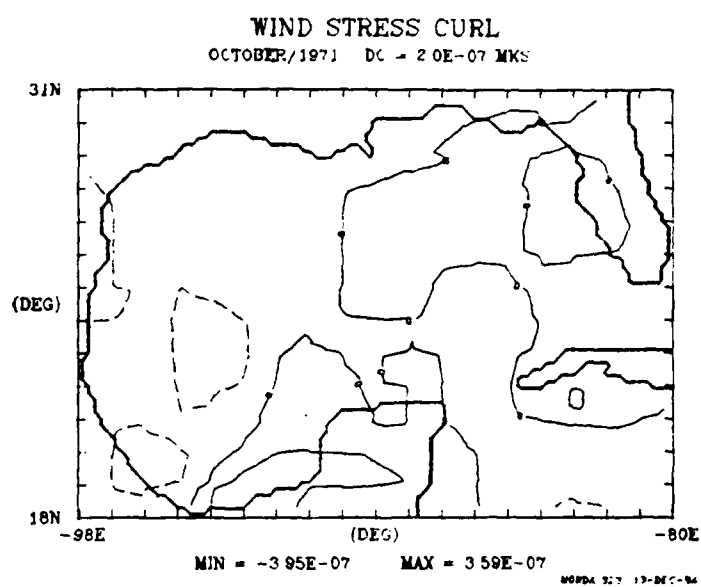
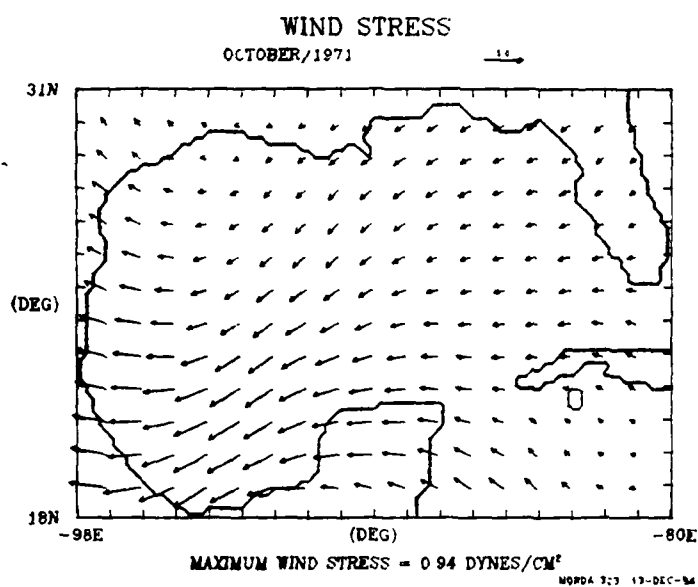
WIND STRESS CURL

SEPTEMBER/1971 DC = 2.0E-07 MKS

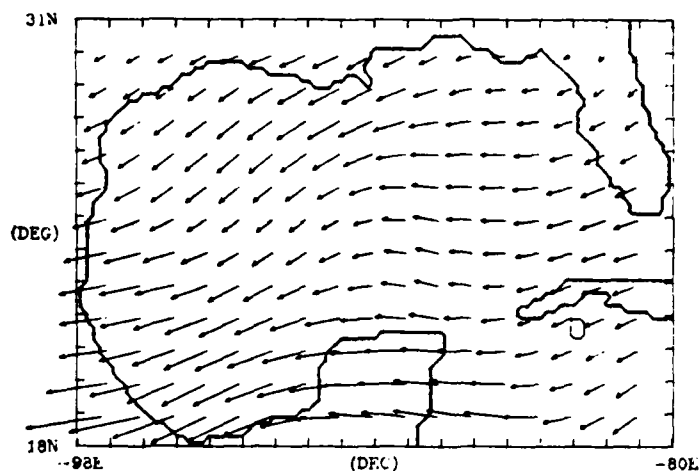


MIN = -6.55E-07 MAX = 8.52E-07

NOFPA 927 19-DEC-84

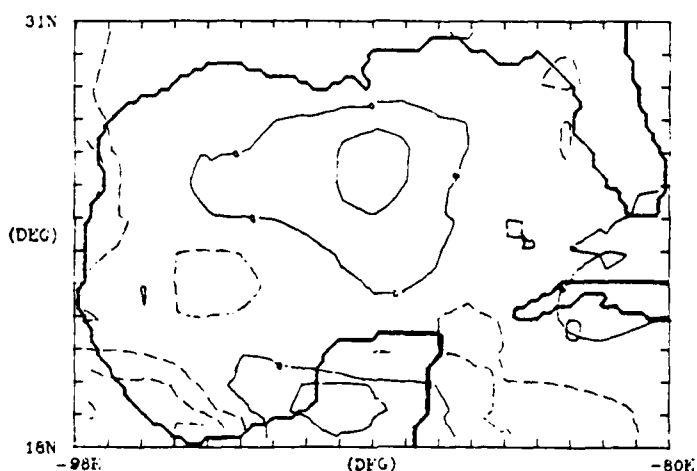


WIND STRESS
JANUARY/1972



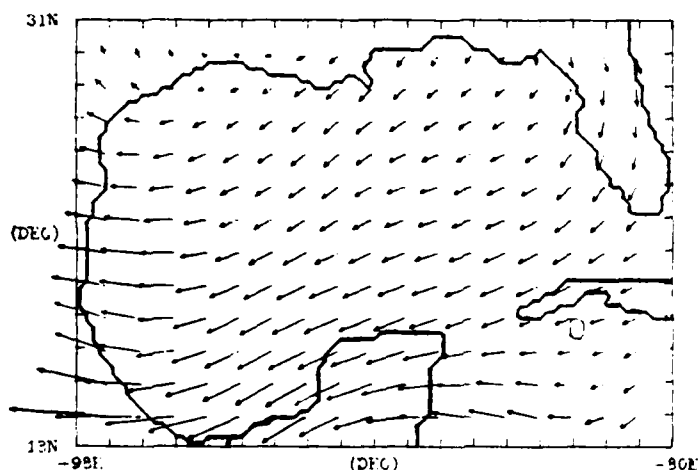
MAXIMUM WIND STRESS = 1.87 DYNES/CM²
NORPA 327 19-DEC-84

WIND STRESS CURL
JANUARY/1972 DC = 2.0E-07 MKS



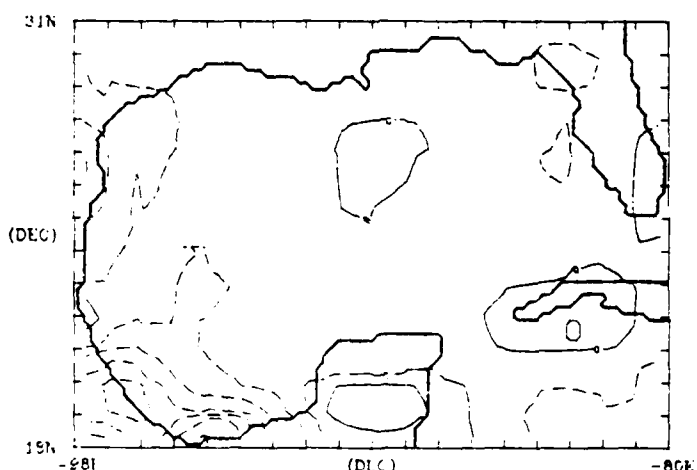
MIN = -7.20E-07 MAX = 3.95E-07
NORPA 327 19-DEC-84

WIND STRESS
FEBRUARY/1972



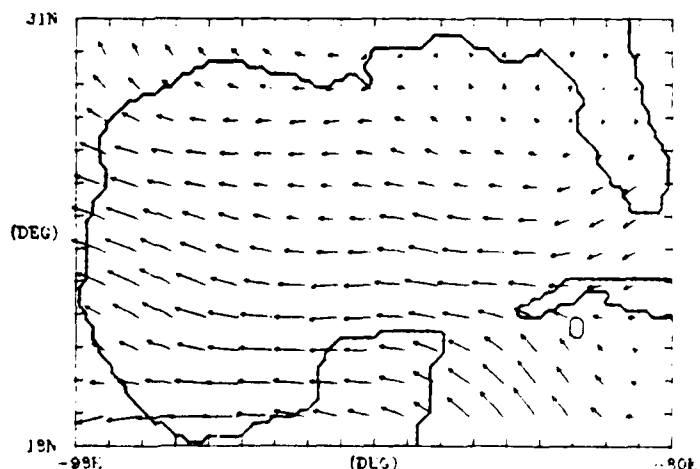
MAXIMUM WIND STRESS = 2.34 DYNES/CM²
NORPA 327 19-DEC-84

WIND STRESS CURL
FEBRUARY/1972 DC = 2.0E-07 MKS



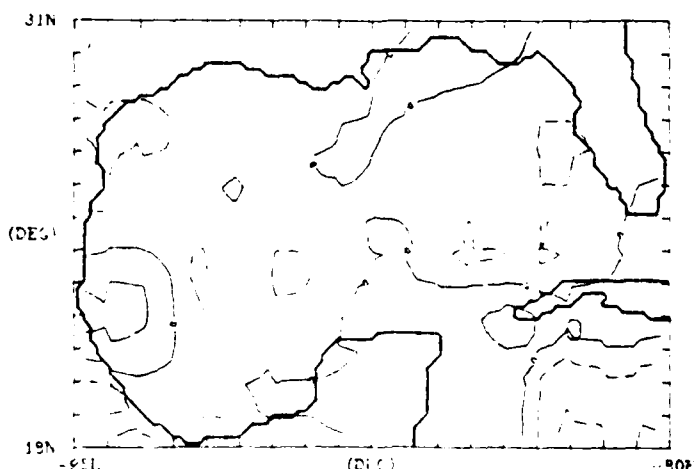
MIN = -1.23E-06 MAX = 3.71E-07
NORPA 327 19-DEC-84

WIND STRESS
MARCH/1972



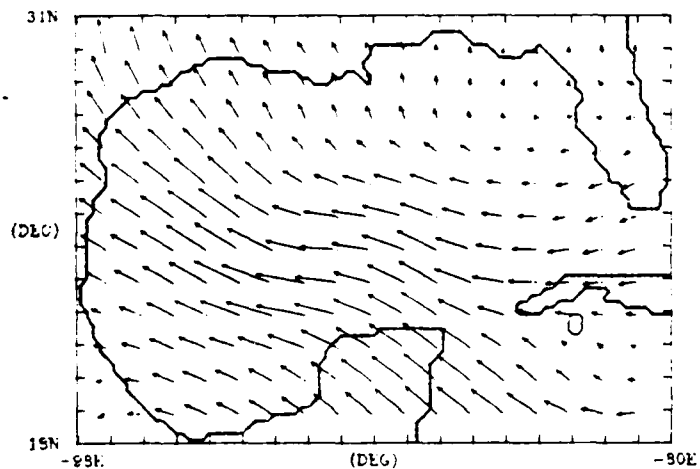
MAXIMUM WIND STRESS = 0.82 DYNES/CM²
NORPA 327 19-DEC-84

WIND STRESS CURL
MARCH/1972 DC = 2.0E-07 MKS

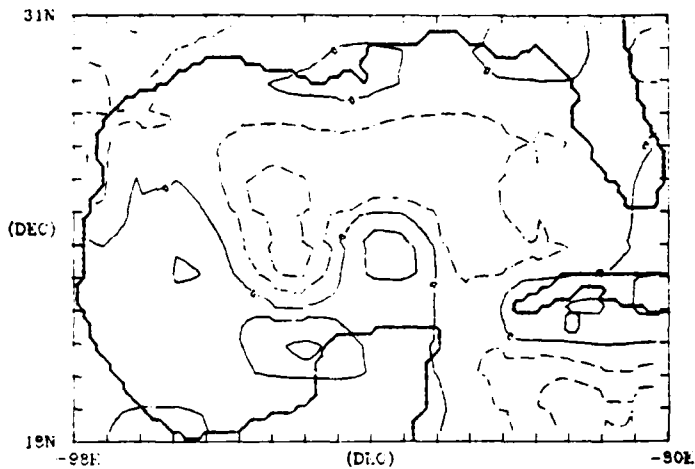


MIN = -4.44E-07 MAX = 2.52E-07
NORPA 327 19-DEC-84

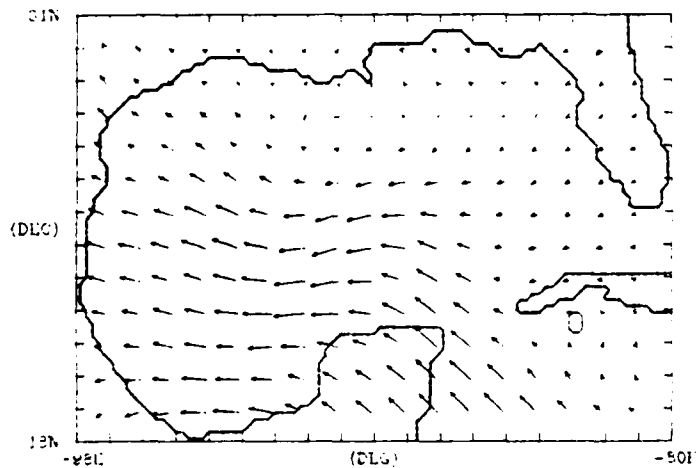
WIND STRESS
APRIL/1972



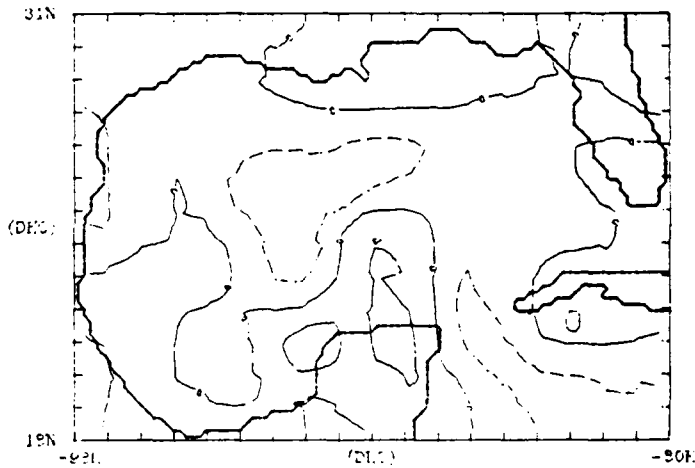
WIND STRESS CURL
APRIL/1972 DC = 2.0E-07 MKS



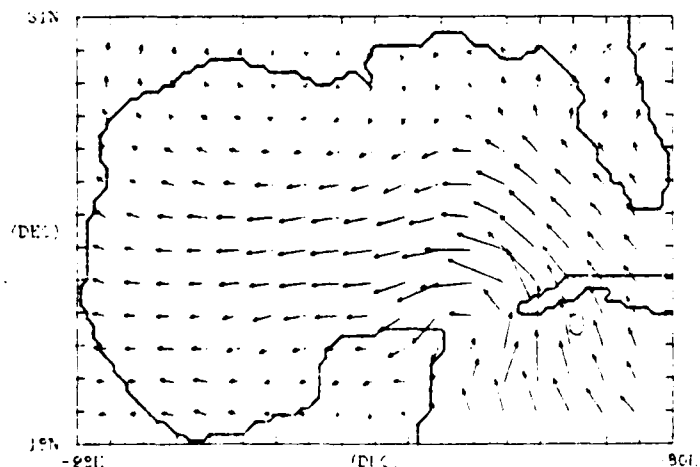
WIND STRESS
MAY/1972



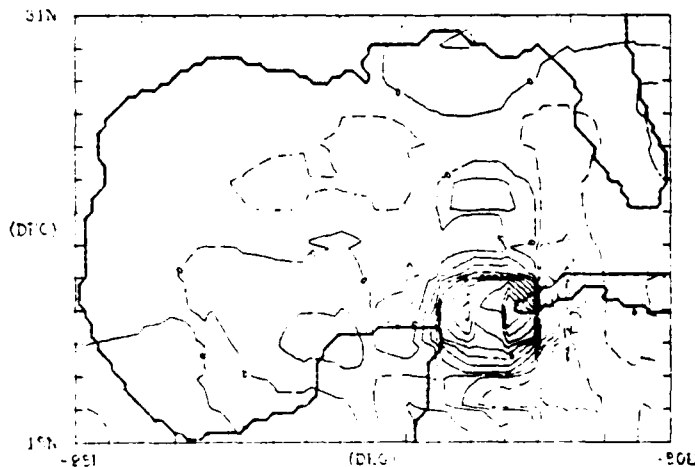
WIND STRESS CURL
MAY/1972 DC = 2.0E-07 MKS



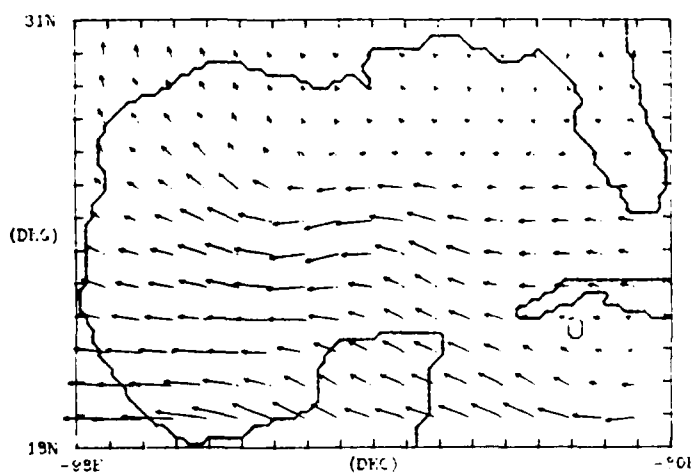
WIND STRESS
JUNE/1972



WIND STRESS CURL
JUNE/1972 DC = 2.0E-07 MKS

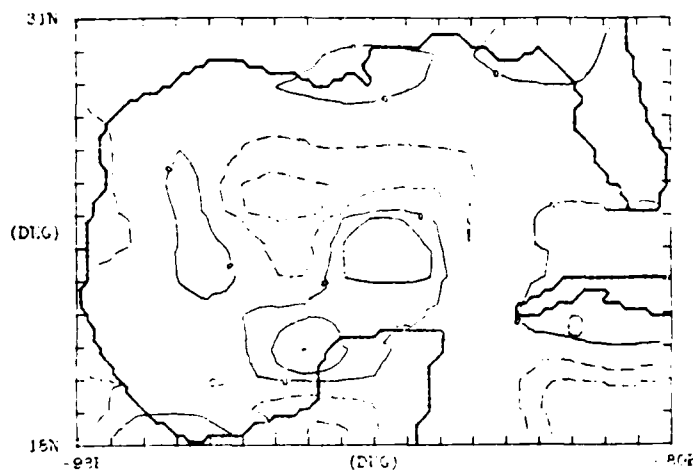


WIND STRESS
JULY/1972



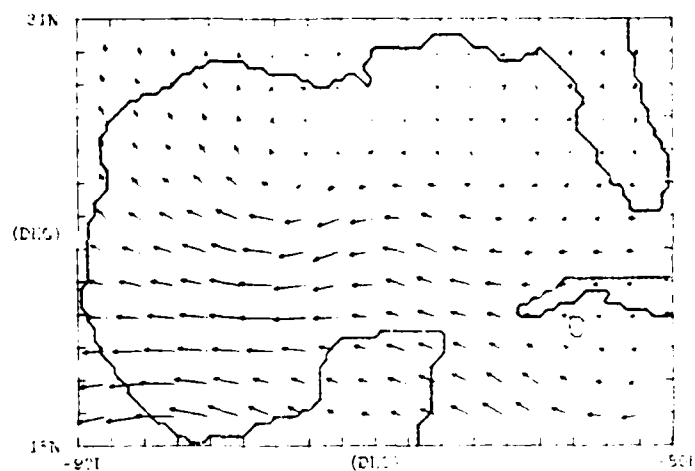
MAXIMUM WIND STRESS = 1.25 DYNES/CM²
NOAA/... 1972

WIND STRESS CURL
JULY/1972 DC = 1.0E-09 M/S



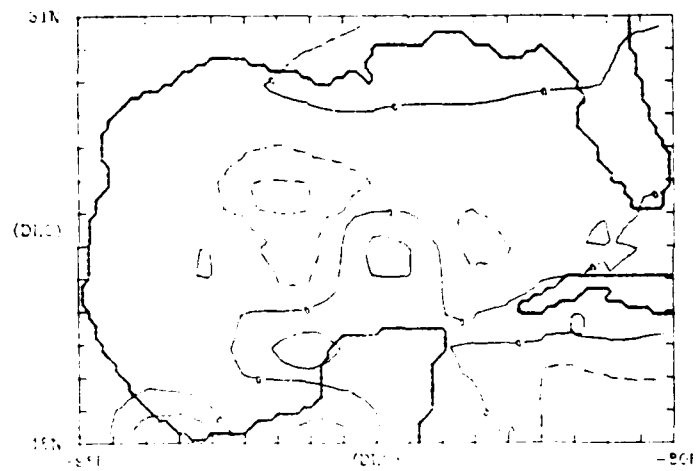
MIN = -5.17E-09 MAX = 4.48E-09
NOAA/... 1972

WIND STRESS
AUGUST/1972



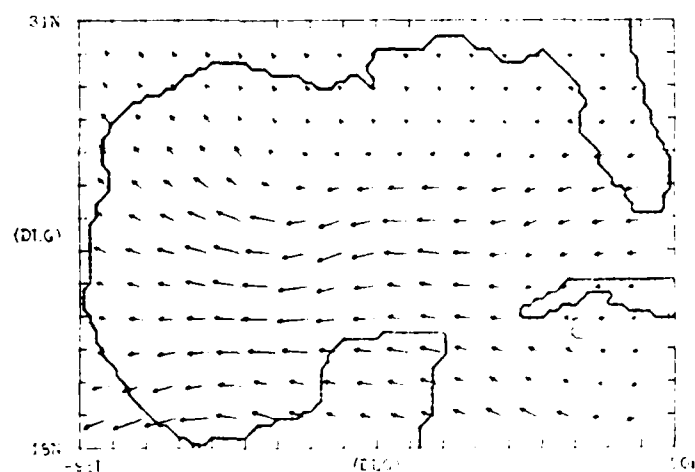
MAXIMUM WIND STRESS = 0.85 DYNES/CM²
NOAA/... 1972

WIND STRESS CURL
AUGUST/1972 DC = 2.0E-09 M/S



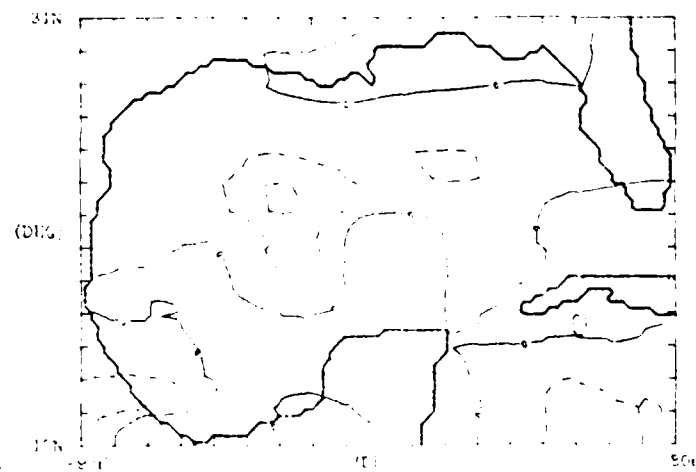
MIN = -4.50E-09 MAX = 3.54E-09
NOAA/... 1972

WIND STRESS
SEPTEMBER/1972



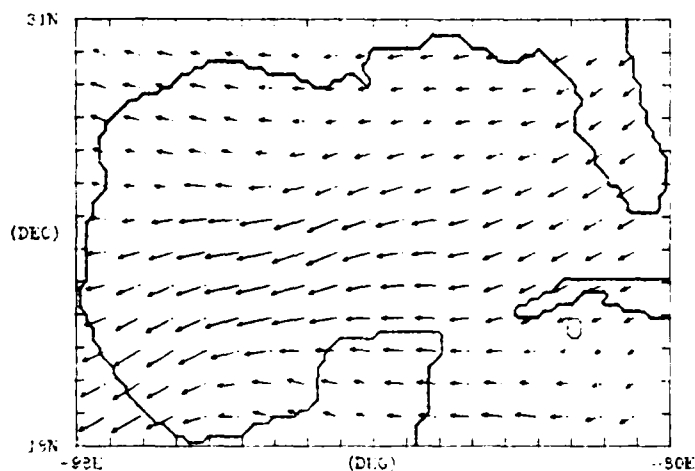
MAXIMUM WIND STRESS = 0.91 DYNES/CM²
NOAA/... 1972

WIND STRESS CURL
SEPTEMBER/1972 DC = 2.0E-09 M/S



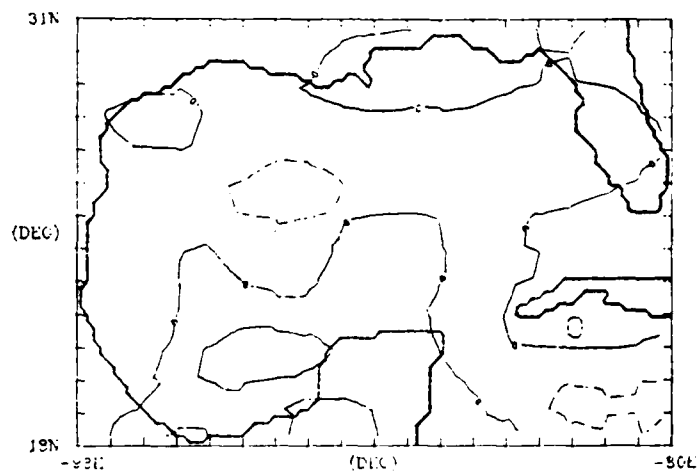
MIN = -4.44E-09 MAX = 2.00E-09
NOAA/... 1972

WIND STRESS
OCTOBER/1972



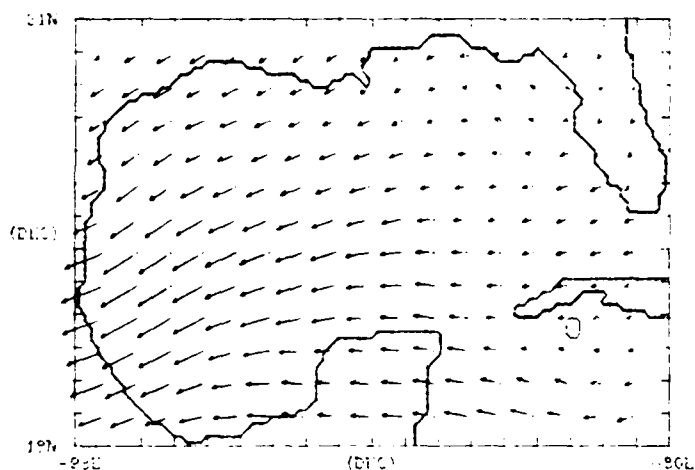
MAXIMUM WIND STRESS = 0.80 DYNES/CM^2
NOFPA 511 10-DEC-72

WIND STRESS CURL
OCTOBER/1972 $DC = 2.0 \text{ E-07 MKS}$



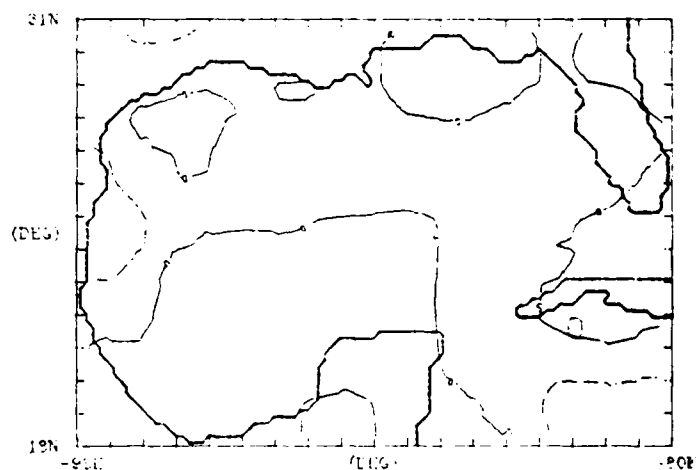
MIN = -2.00 E-07 MAX = 3.11 E-07
NOFPA 511 10-DEC-72

WIND STRESS
NOVEMBER/1972



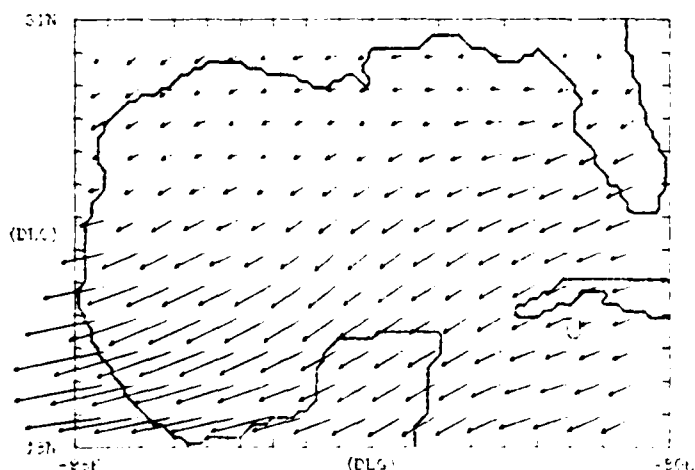
MAXIMUM WIND STRESS = 1.15 DYNES/CM^2
NOFPA 511 11-DEC-72

WIND STRESS CURL
NOVEMBER/1972 $DC = 2.0 \text{ E-07 MKS}$



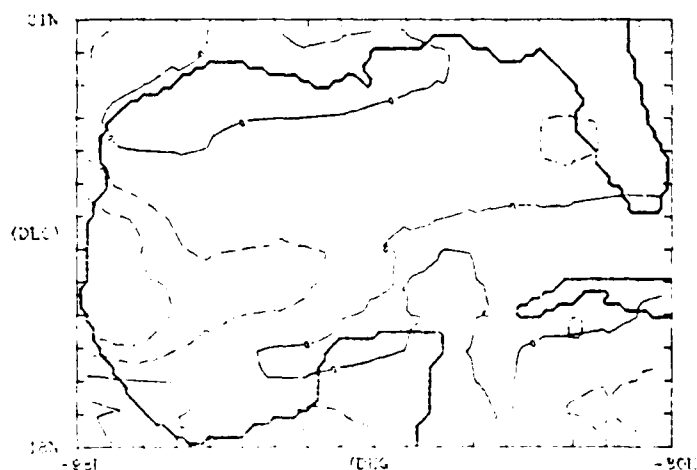
MIN = -0.84 E-07 MAX = 1.45 E-07
NOFPA 511 11-DEC-72

WIND STRESS
DECEMBER/1972



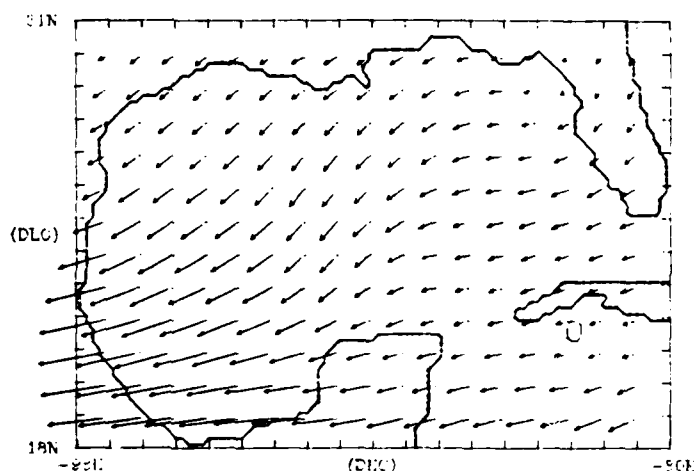
MAXIMUM WIND STRESS = 2.31 DYNES/CM^2
NOFPA 511 12-DEC-72

WIND STRESS CURL
DECEMBER/1972 $DC = 2.0 \text{ E-07 MKS}$



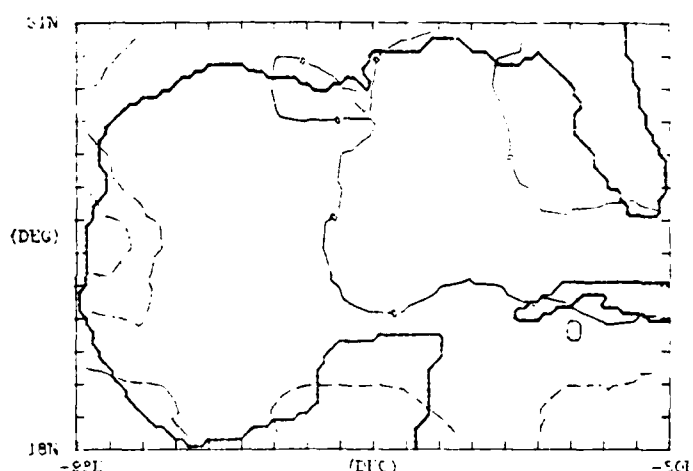
MIN = -5.84 E-07 MAX = 2.53 E-07
NOFPA 511 12-DEC-72

WIND STRESS
JANUARY/1973



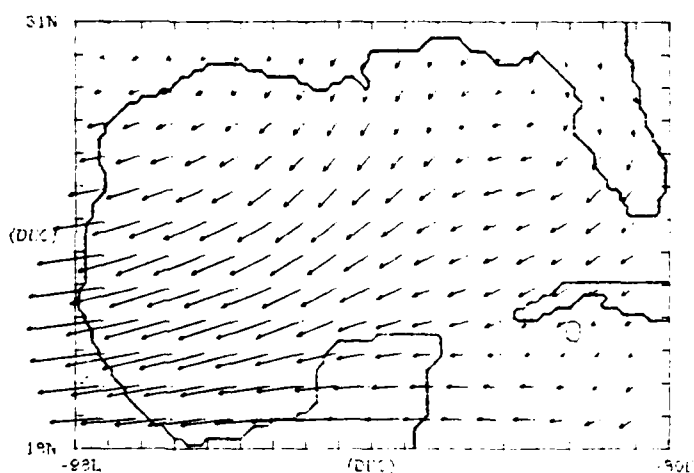
MAXIMUM WIND STRESS = 1.70 DYNES/CM²

WIND STRESS CURL
JANUARY/1973 $LC = 2.01 \cdot 10^{-7} \text{ MPa}$



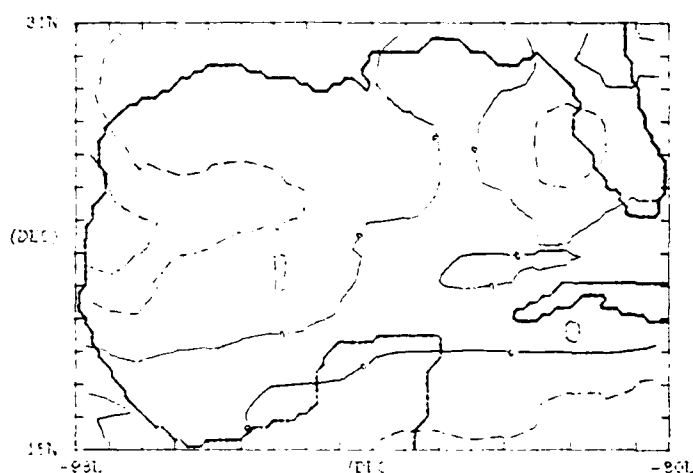
MIN = -5.15E-07 MAX = 1.97E-07

WIND STRESS
FEBRUARY/1973



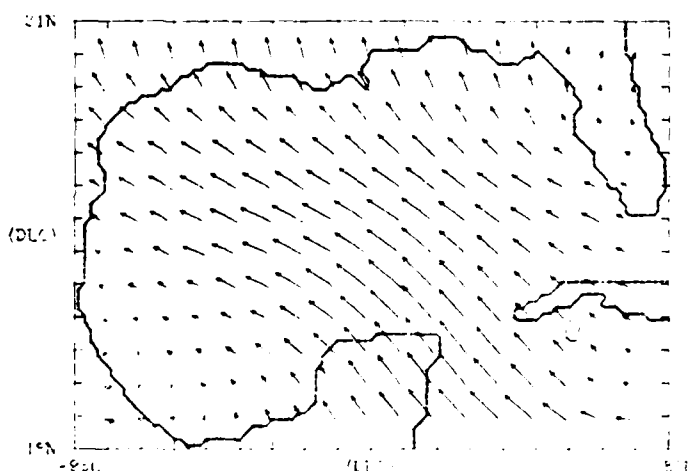
MAXIMUM WIND STRESS = 1.86 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1973 $LC = 2.01 \cdot 10^{-7} \text{ MPa}$



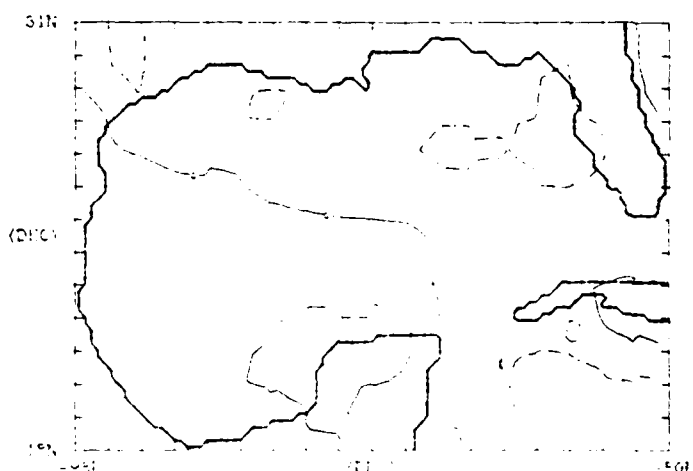
MIN = -5.74E-07 MAX = 2.41E-07

WIND STRESS
MARCH/1973



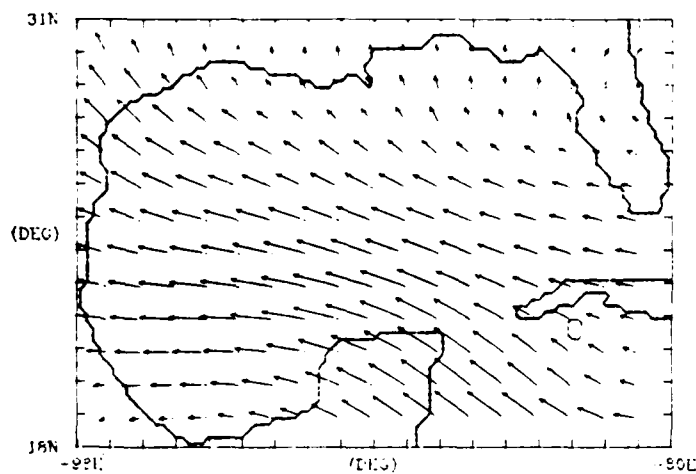
MAXIMUM WIND STRESS = 1.11 DYNES/CM²

WIND STRESS CURL
MARCH/1973 $LC = 2.01 \cdot 10^{-7} \text{ MPa}$



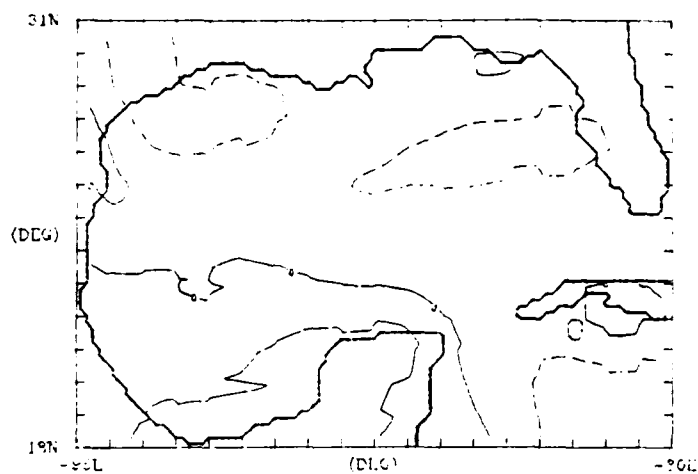
MIN = -1.59E-07 MAX = 4.99E-07

WIND STRESS
APRIL/1972



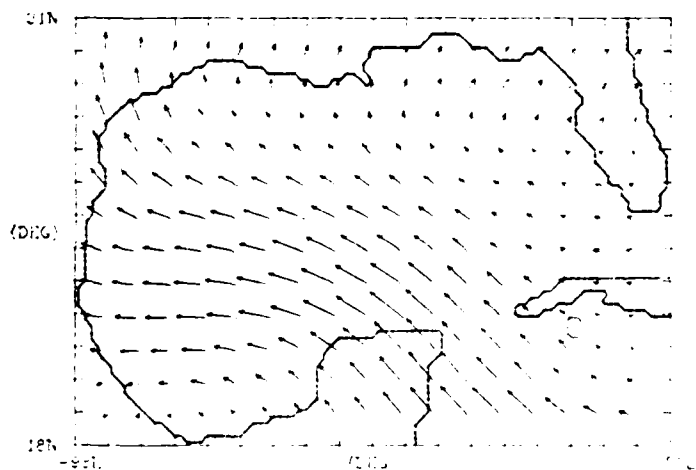
MAXIMUM WIND STRESS = 1.15 DYNES/CM²

WIND STRESS CURL
APRIL/1972 DC = 2.01-07 M/S



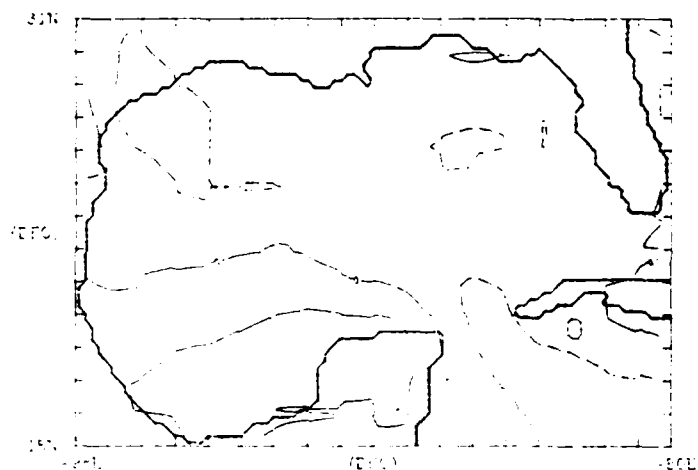
MIN = -0.75E-07 MAX = 0.20E-07

WIND STRESS
MAY/1972



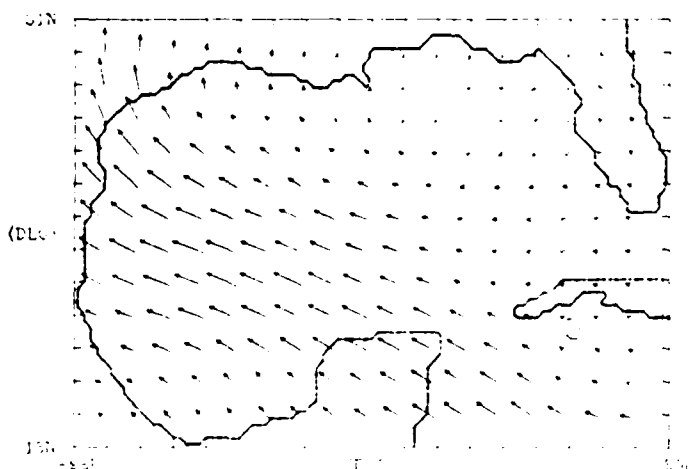
MAXIMUM WIND STRESS = 1.05 DYNES/CM²

WIND STRESS CURL
MAY/1972 DC = 2.01-07 M/S



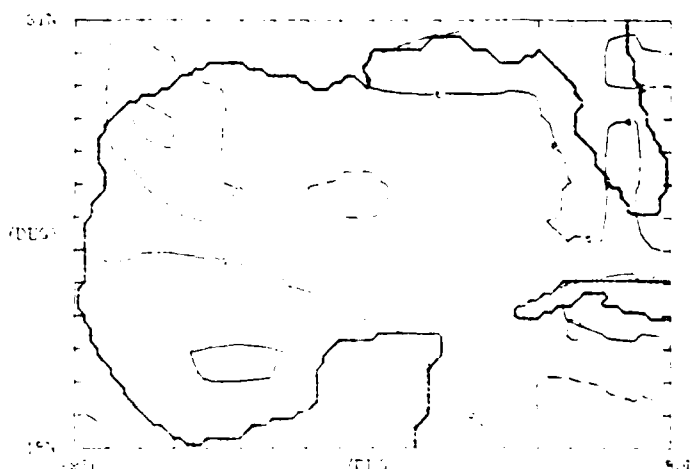
MIN = -0.87E-07 MAX = 0.37E-07

WIND STRESS
JUNE/1972



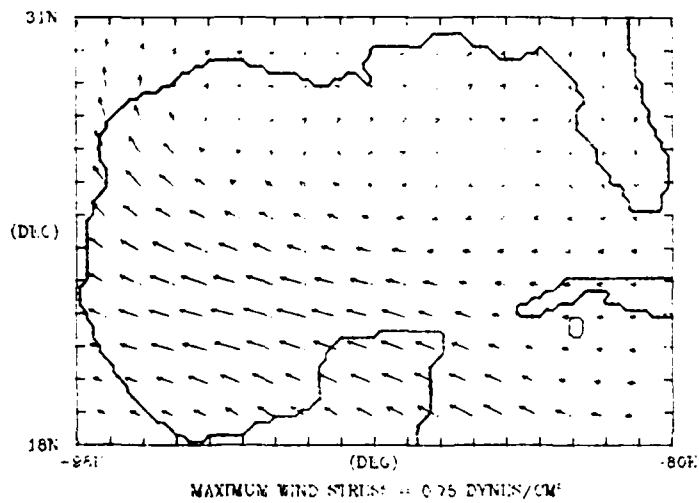
MAXIMUM WIND STRESS = 1.05 DYNES/CM²

WIND STRESS CURL
JUNE/1972 DC = 2.01-07 M/S

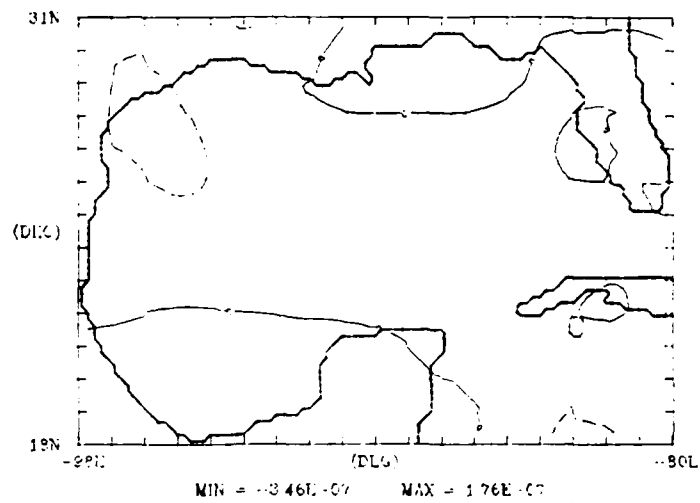


MIN = -0.43E-07 MAX = 0.41E-07

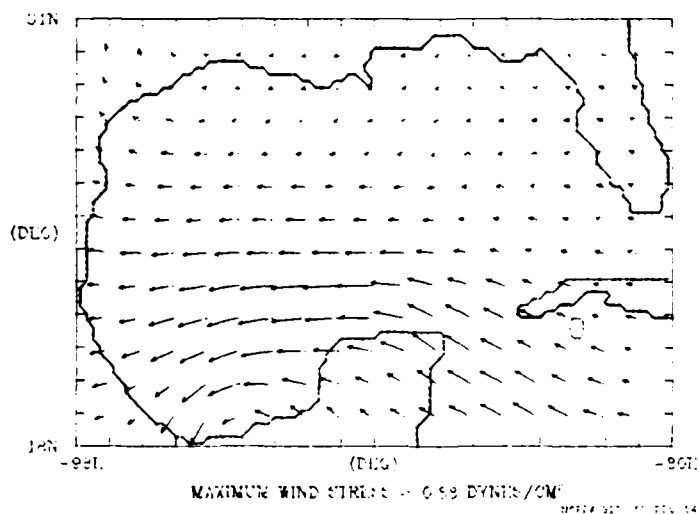
WIND STRESS
JULY/1972



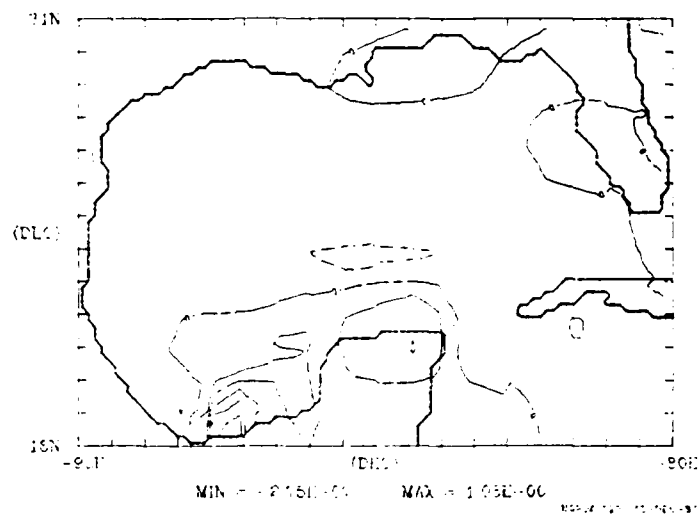
WIND STRESS CURL
JULY/1972 DC = 2.0E-07 MKS



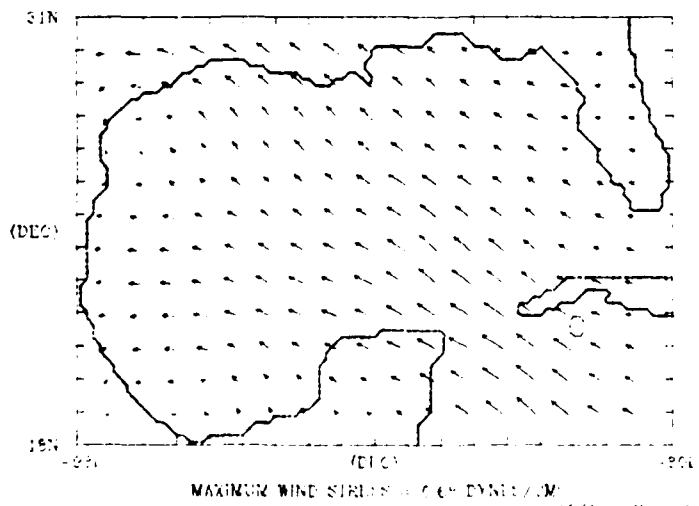
WIND STRESS
AUGUST/1972



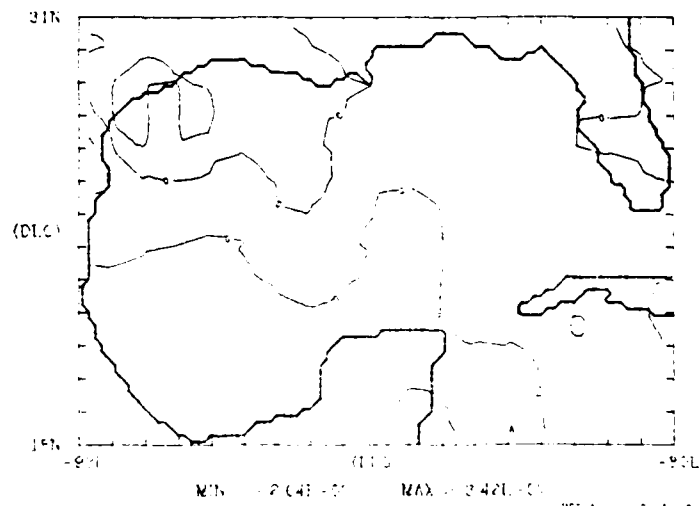
WIND STRESS CURL
AUGUST/1972 DC = 2.0E-07 MKS



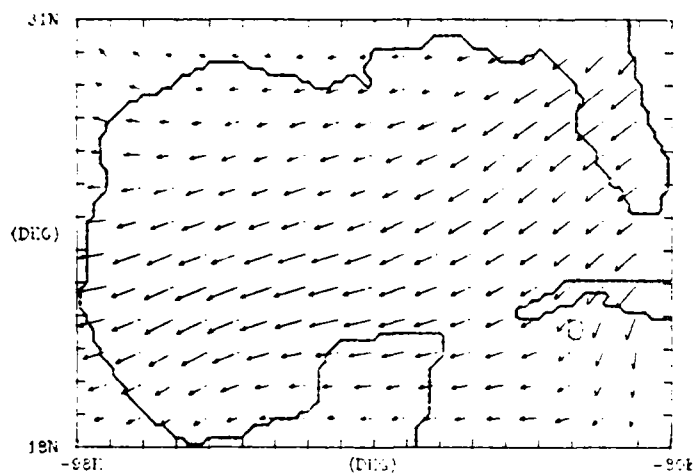
WIND STRESS
SEPTEMBER/1972



WIND STRESS CURL
SEPTEMBER/1972 DC = 2.0E-07 MKS



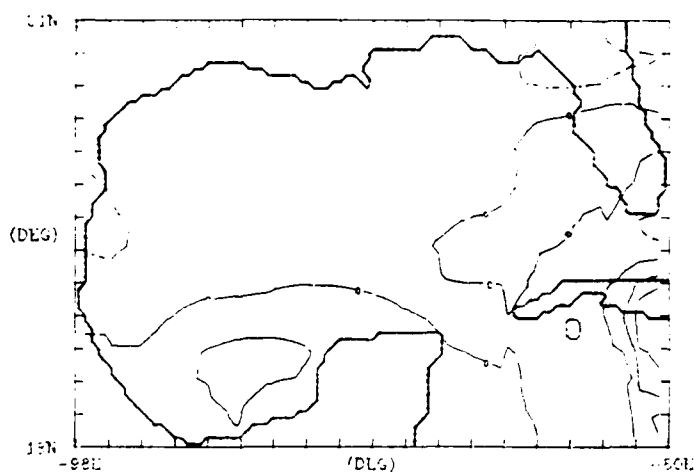
WIND STRESS
OCTOBER/1972



MAXIMUM WIND STRESS = 0.84 DYNES/CM^2

NOAA/PMEL/CI-1000-84

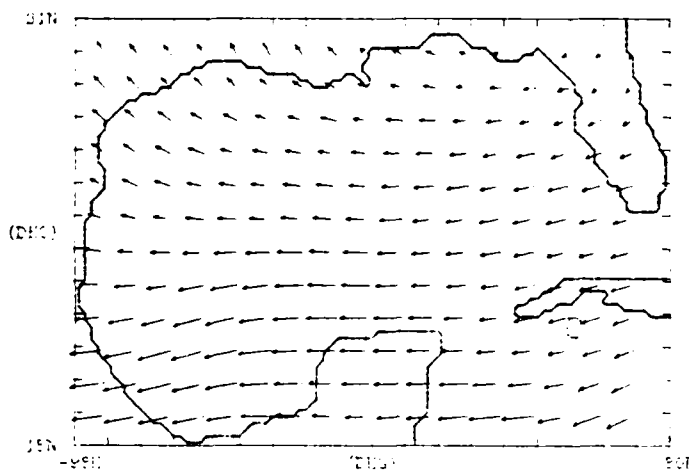
WIND STRESS CURL
OCTOBER/1972 $\text{DC} = 2.0 \text{E-07 MKS}$



MIN = -2.31E-07 MAX = 5.91E-07

NOAA/PMEL/CI-1000-84

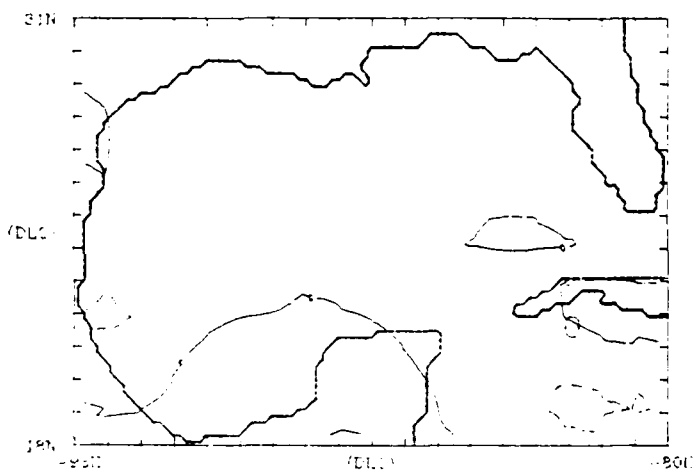
WIND STRESS
NOVEMBER/1972



MAXIMUM WIND STRESS = 0.88 DYNES/CM^2

NOAA/PMEL/CI-1000-84

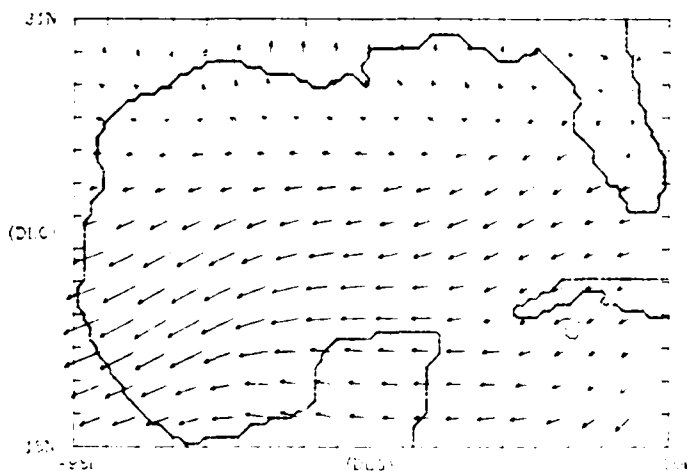
WIND STRESS CURL
NOVEMBER/1972 $\text{DC} = 2.0 \text{E-07 MKS}$



MIN = -2.0E-07 MAX = 1.0E-07

NOAA/PMEL/CI-1000-84

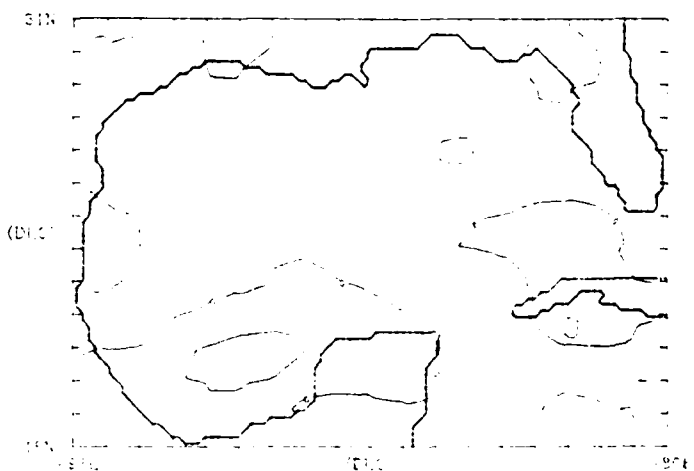
WIND STRESS
DECEMBER/1972



MAXIMUM WIND STRESS = 1.0 DYNES/CM^2

NOAA/PMEL/CI-1000-84

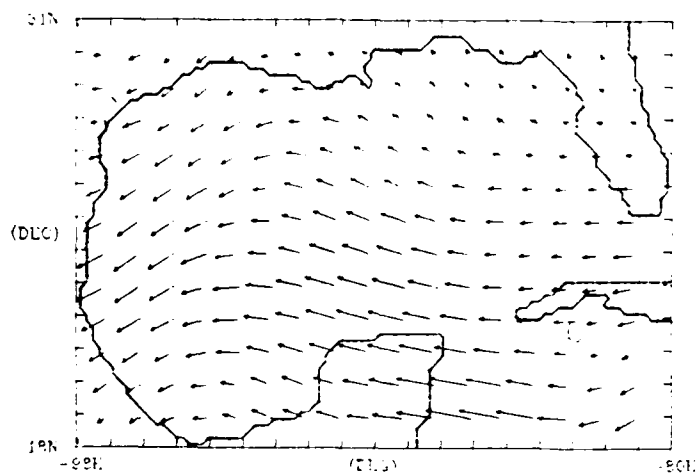
WIND STRESS CURL
DECEMBER/1972 $\text{DC} = 2.0 \text{E-07 MKS}$



MIN = -1.4E-07 MAX = 1.9E-07

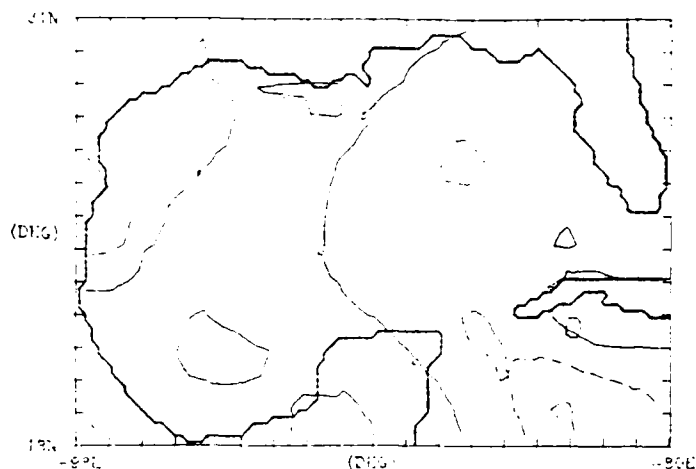
NOAA/PMEL/CI-1000-84

WIND STRESS
JANUARY/1974



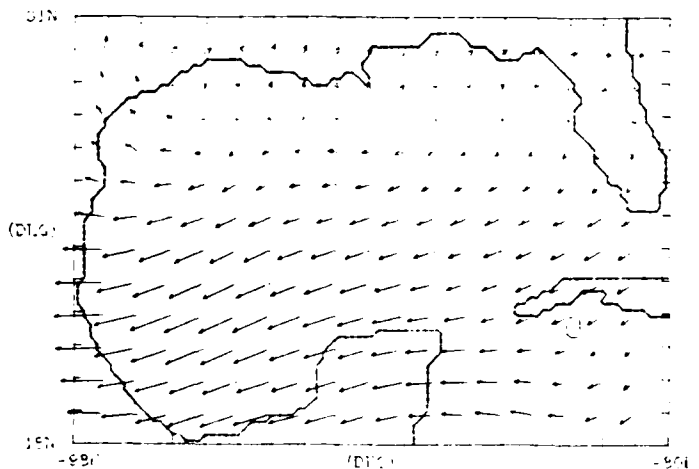
MAXIMUM WIND STRESS = 1.11 DYNES/CM^2

WIND STRESS CURL
JANUARY/1974 $10^6 = 2.0E-07 \text{ MKS}$



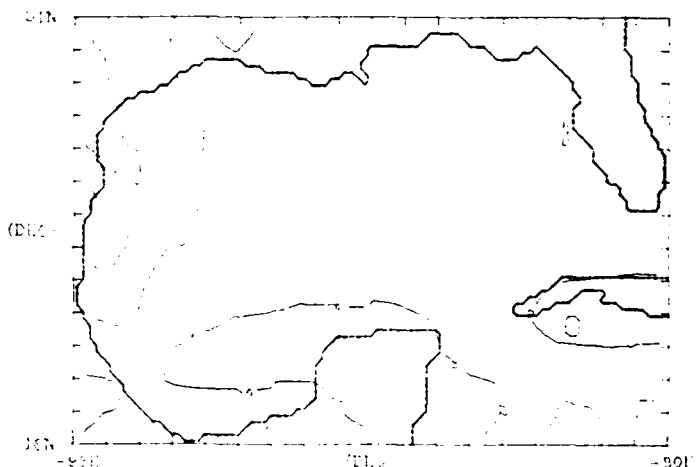
MIN = $-4.31E-07$ MAX = $2.46E-07$

WIND STRESS
FEBRUARY/1974



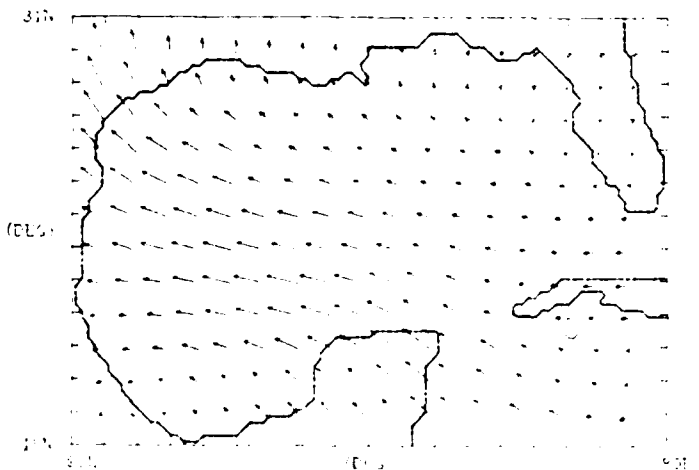
MAXIMUM WIND STRESS = 1.25 DYNES/CM^2

WIND STRESS CURL
FEBRUARY/1974 $10^6 = 2.0E-07 \text{ MKS}$



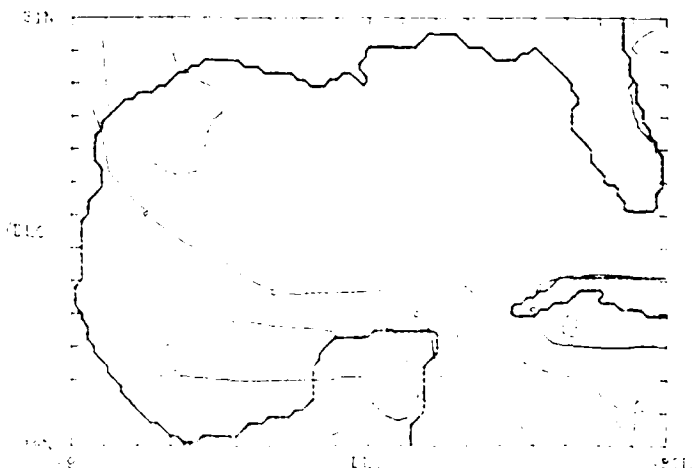
MIN = $-5.05E-07$ MAX = $1.99E-07$

WIND STRESS
MARCH/1974



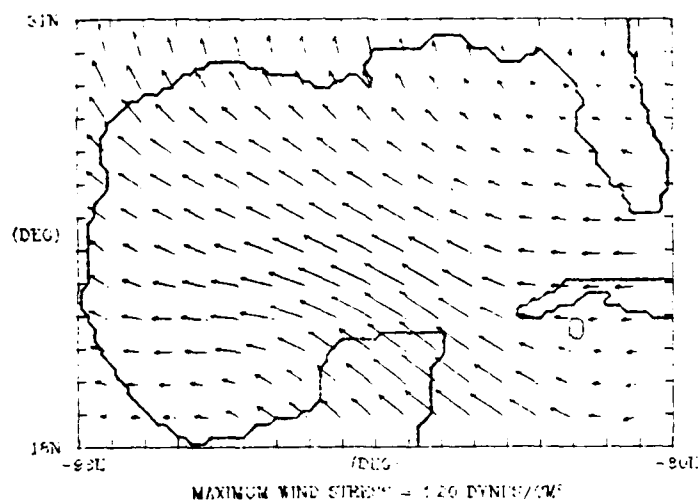
MAXIMUM WIND STRESS = 0.94 DYNES/CM^2

WIND STRESS CURL
MARCH/1974 $10^6 = 2.0E-07 \text{ MKS}$

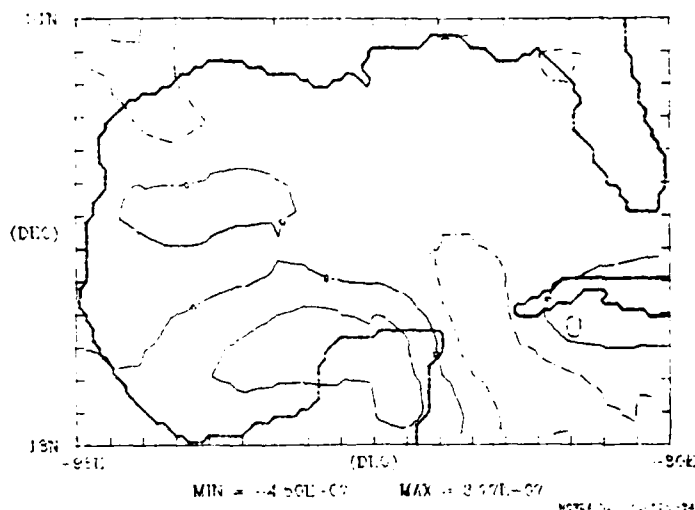


MIN = $-4.10E-07$ MAX = $1.04E-07$

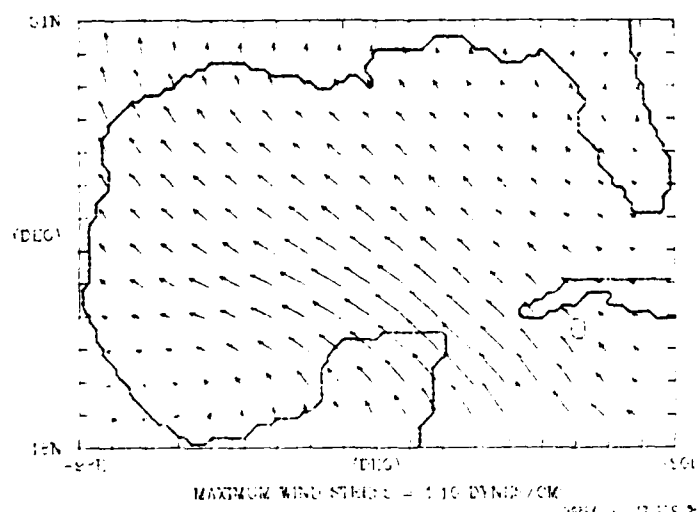
WIND STRESS
APRIL/1974



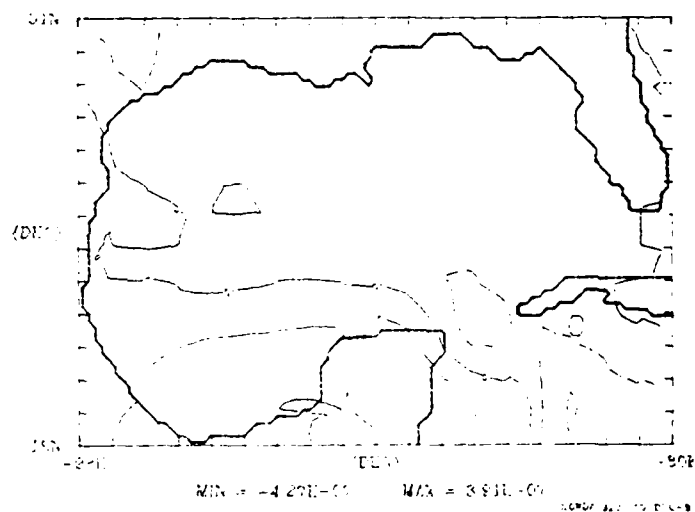
WIND STRESS CURL
APRIL/1974 $10^6 = 2.0 \times 10^{-10}$ MFS



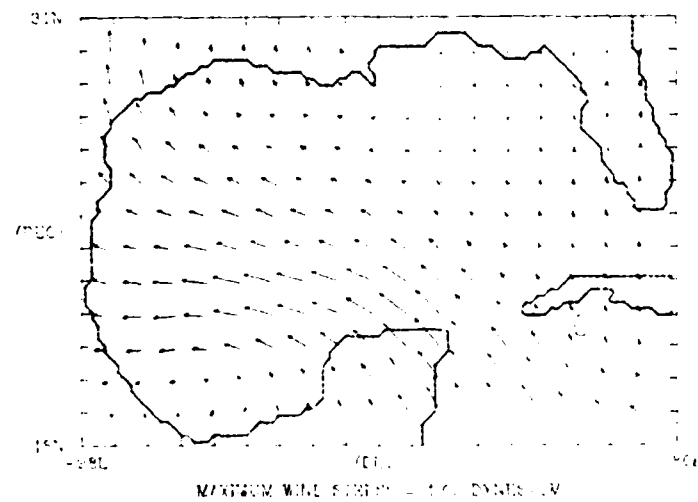
WIND STRESS
MAY/1974



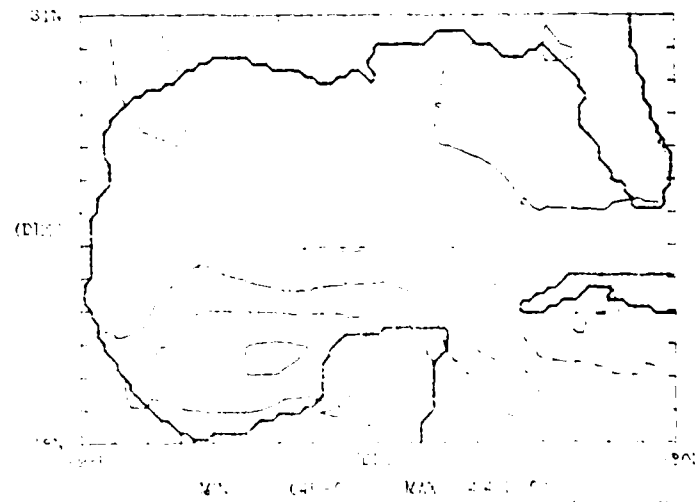
WIND STRESS CURL
MAY/1974 $10^6 = 2.0 \times 10^{-10}$ MFS



WIND STRESS
JUNE/1974

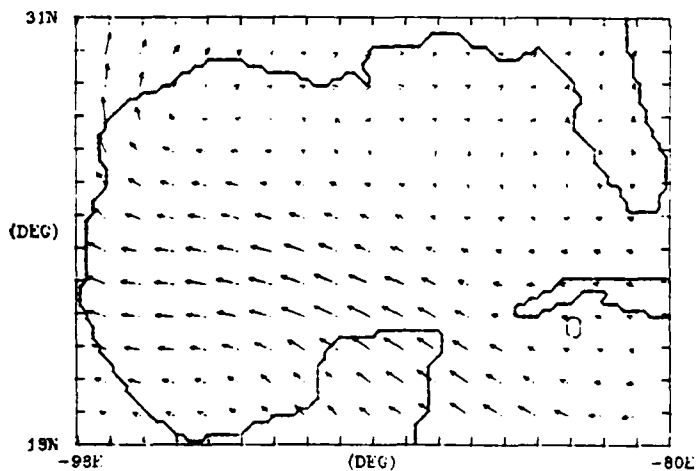


WIND STRESS CURL
JUNE/1974 $10^6 = 2.0 \times 10^{-10}$ MFS



WIND STRESS
JULY/1974

10

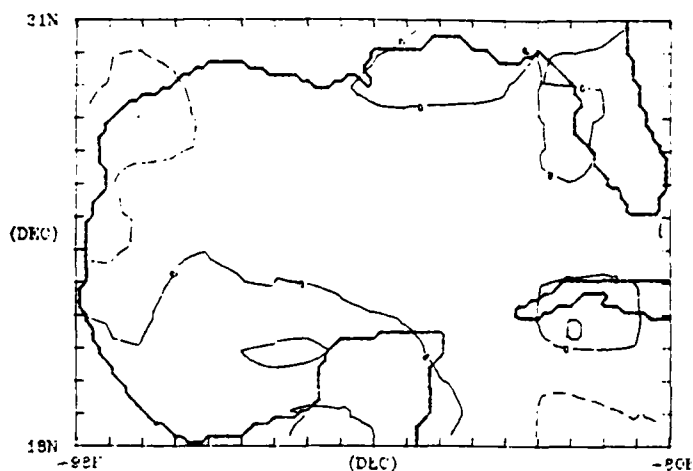


MAXIMUM WIND STRESS = 0.62 DYNES/CM²

NOFPA 527 17-DEC-84

WIND STRESS CURL

JULY/1974 DC = 2.0E-07 MKS

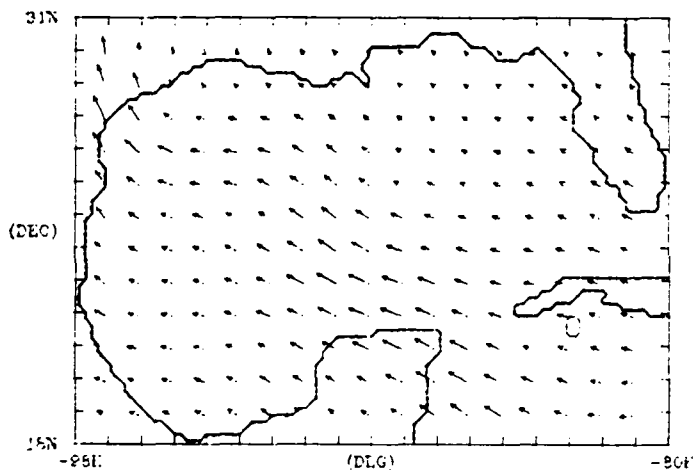


MIN = -4.62E-07 MAX = 2.27E-07

NOFPA 527 17-DEC-84

WIND STRESS
AUGUST/1974

10

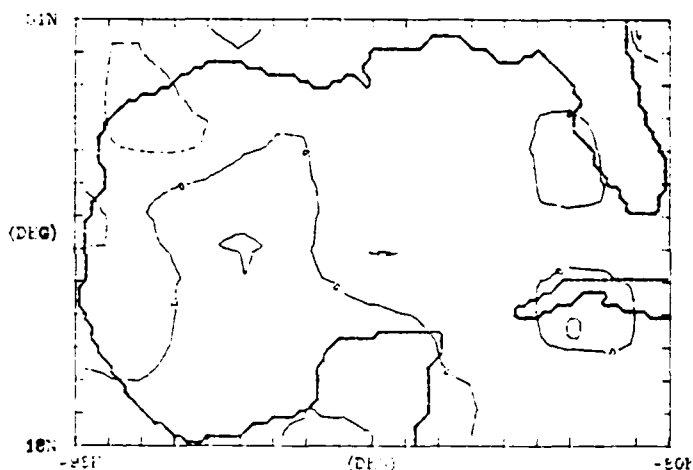


MAXIMUM WIND STRESS = 0.64 DYNES/CM²

NOFPA 527 17-DEC-84

WIND STRESS CURL

AUGUST/1974 DC = 2.0E-07 MKS

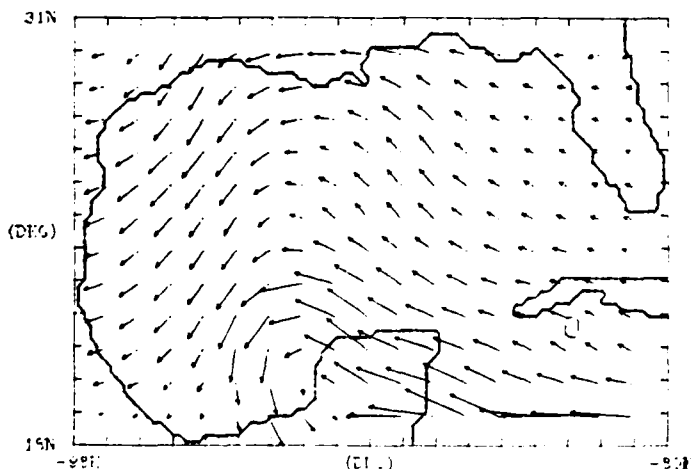


MIN = -2.78E-07 MAX = 1.81E-07

NOFPA 527 17-DEC-84

WIND STRESS
SEPTEMBER/1974

10

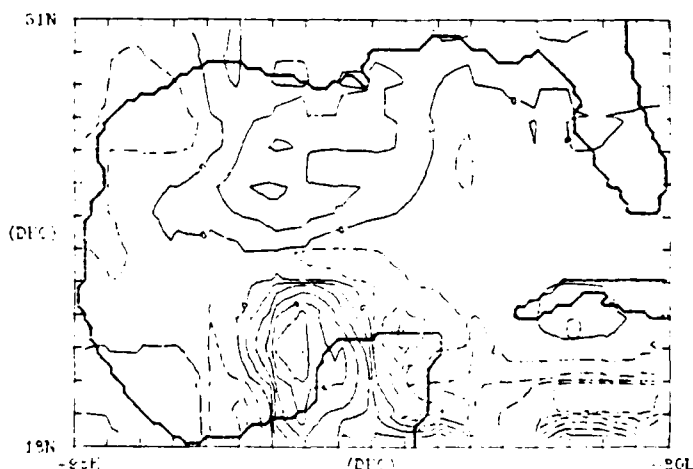


MAXIMUM WIND STRESS = 1.67 DYNES/CM²

NOFPA 527 17-DEC-84

WIND STRESS CURL

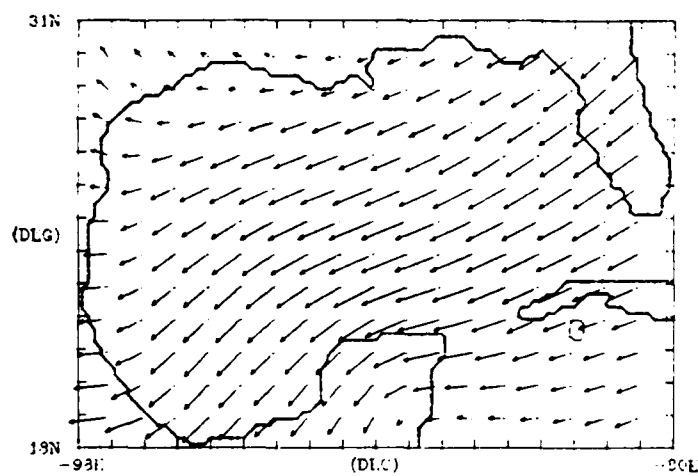
SEPTEMBER/1974 DC = 2.0E-07 MKS



MIN = -8.92E-07 MAX = 1.20E-06

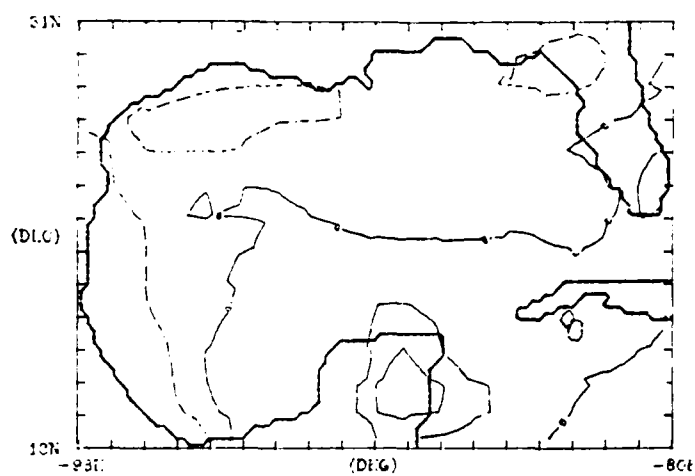
NOFPA 527 17-DEC-84

WIND STRESS
OCTOBER/1974



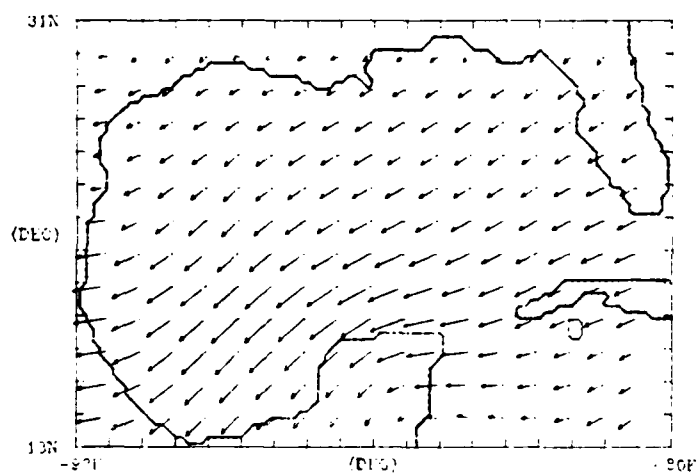
MAXIMUM WIND STRESS = 1.18 DYNES/CM²

WIND STRESS CURL
OCTOBER/1974 DC = 2.0E-07 MKS



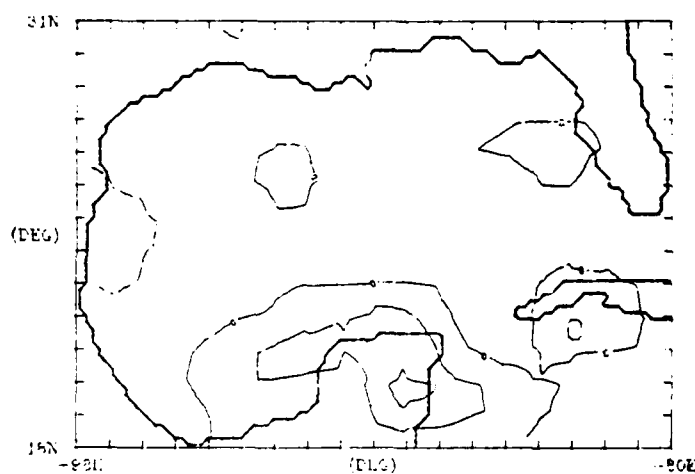
MIN = -3.84E-07 MAX = 5.65E-07

WIND STRESS
NOVEMBER/1974



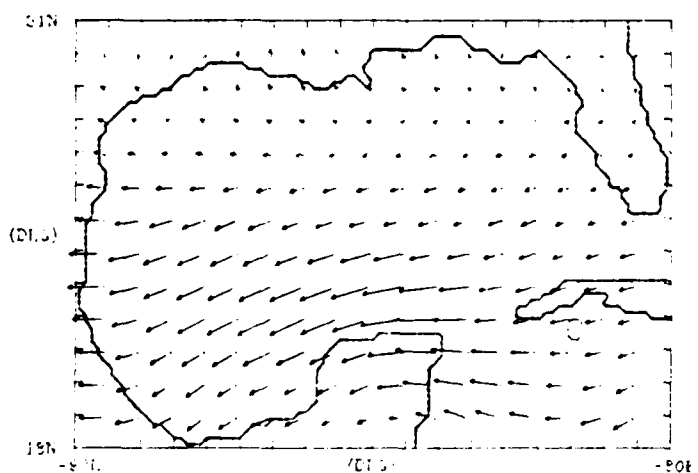
MAXIMUM WIND STRESS = 0.84 DYNES/CM²

WIND STRESS CURL
NOVEMBER/1974 DC = 2.0E-07 MKS



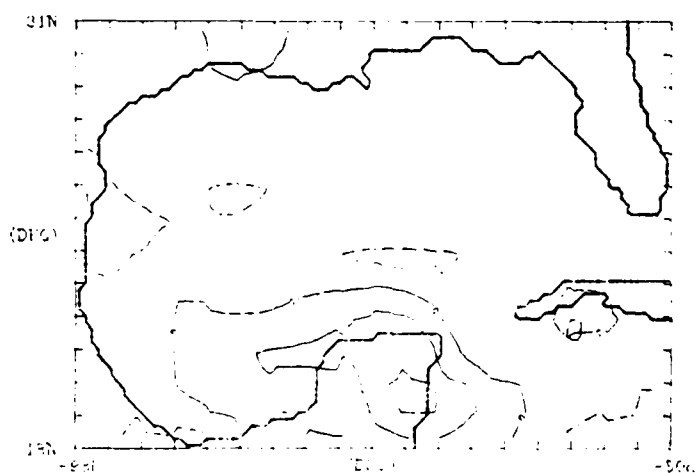
MIN = -3.94E-07 MAX = 4.64E-07

WIND STRESS
DECEMBER/1974



MAXIMUM WIND STRESS = 1.09 DYNES/CM²

WIND STRESS CURL
DECEMBER/1974 DC = 2.0E-07 MKS

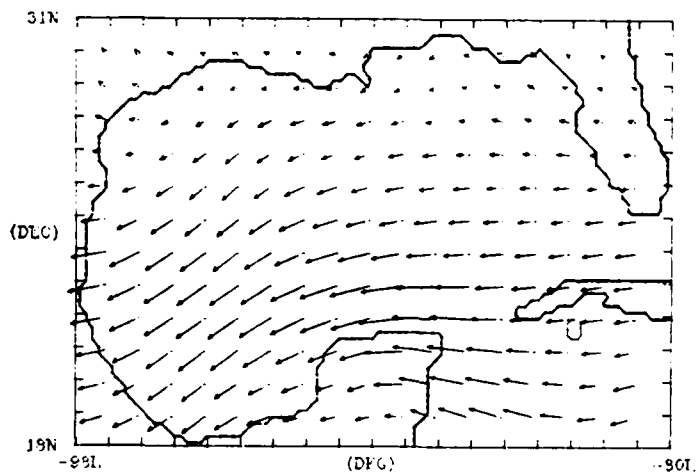


MIN = -4.08E-07 MAX = 4.66E-07

WIND STRESS

JANUARY/1975

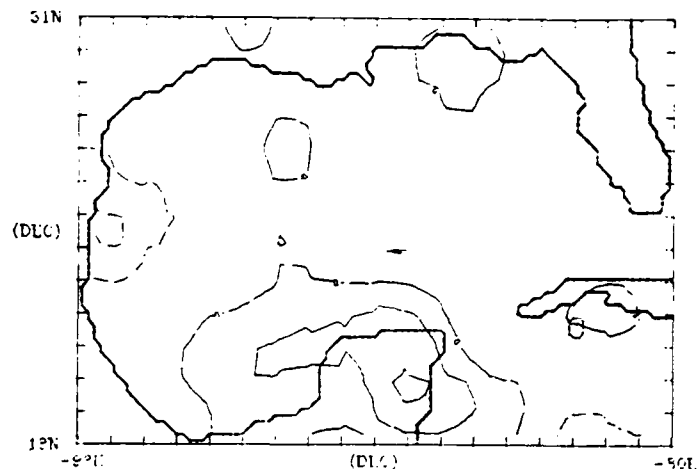
10



MAXIMUM WIND STRESS = 1.05 DYNES/CM²

WIND STRESS CURL

JANUARY/1975 DC = 2.0E-07 MFS

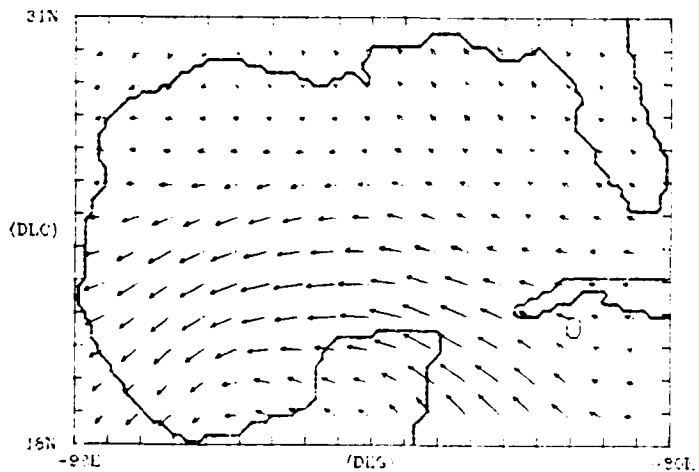


MIN = -4.28E-07 MAX = 4.45E-07

WIND STRESS

FEBRUARY/1975

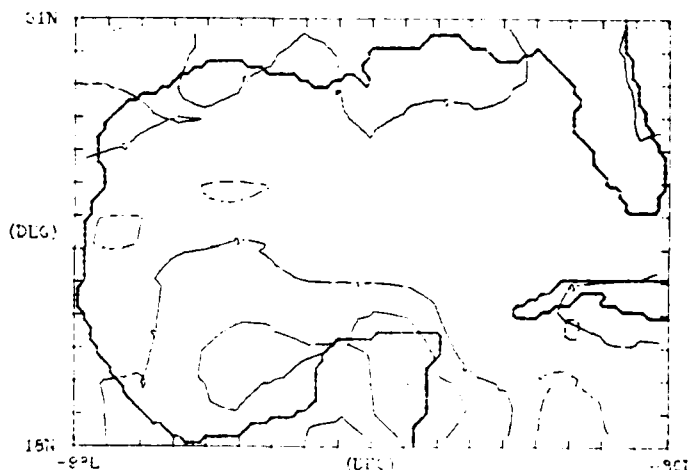
10



MAXIMUM WIND STRESS = 0.96 DYNES/CM²

WIND STRESS CURL

FEBRUARY/1975 DC = 2.0E-07 MFS

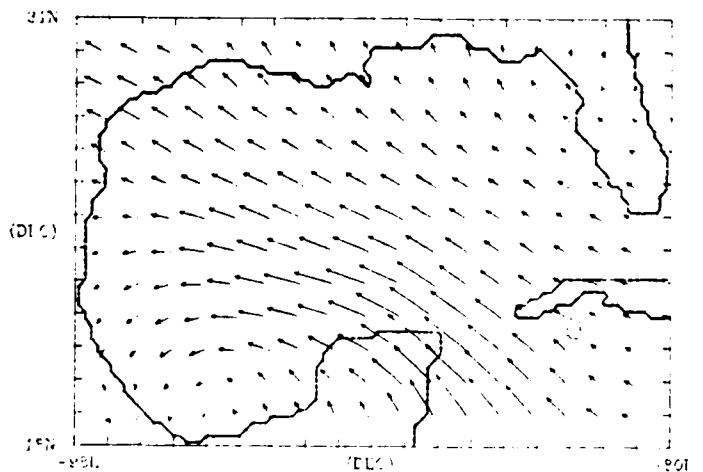


MIN = -4.21E-07 MAX = 4.01E-07

WIND STRESS

MARCH/1975

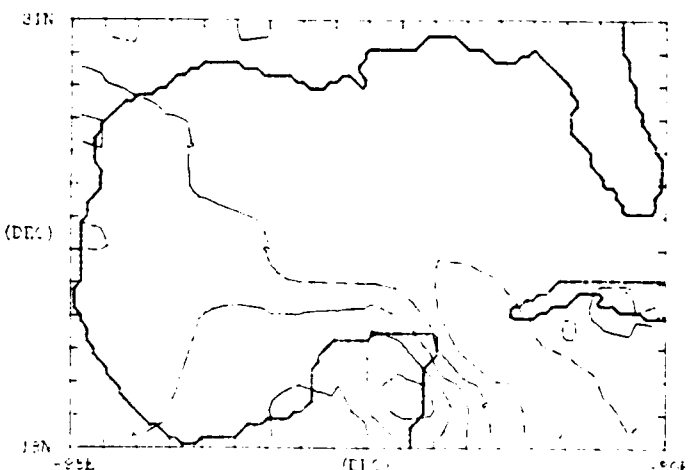
10



MAXIMUM WIND STRESS = 1.47 DYNES/CM²

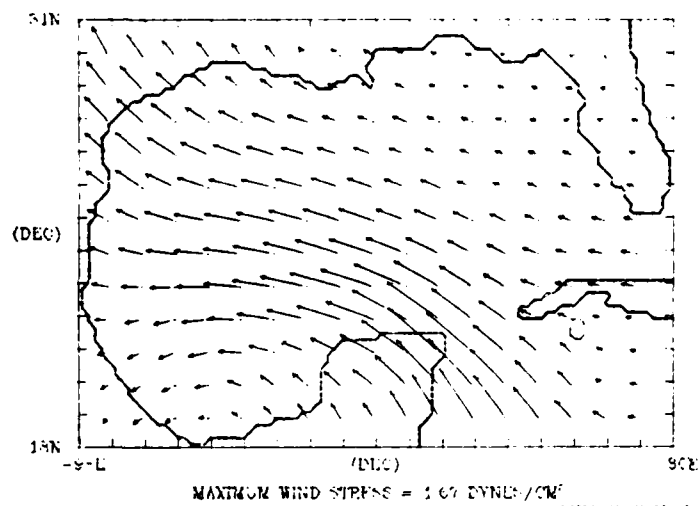
WIND STRESS CURL

MARCH/1975 DC = 2.0E-07 MFS

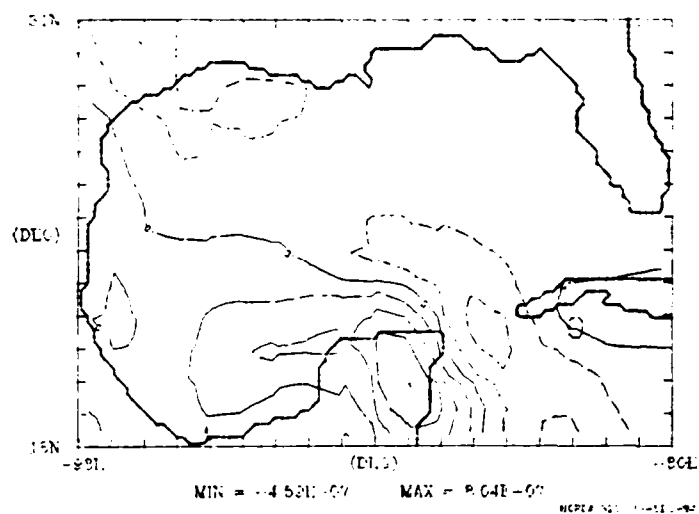


MIN = -4.11E-07 MAX = 4.11E-07

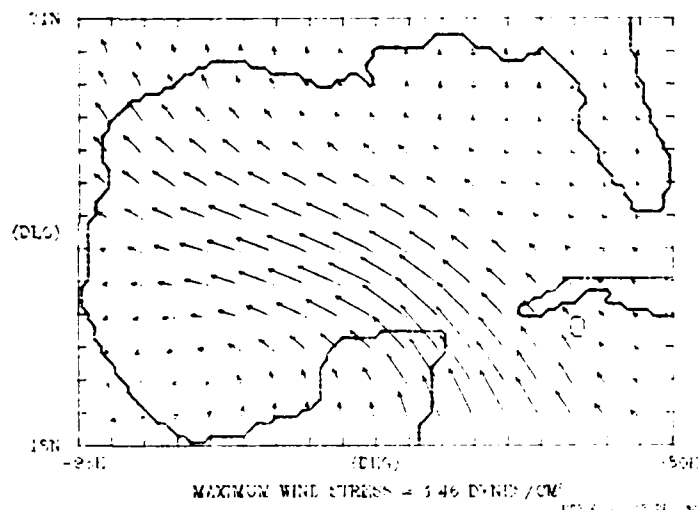
WIND STRESS
APRIL/1975



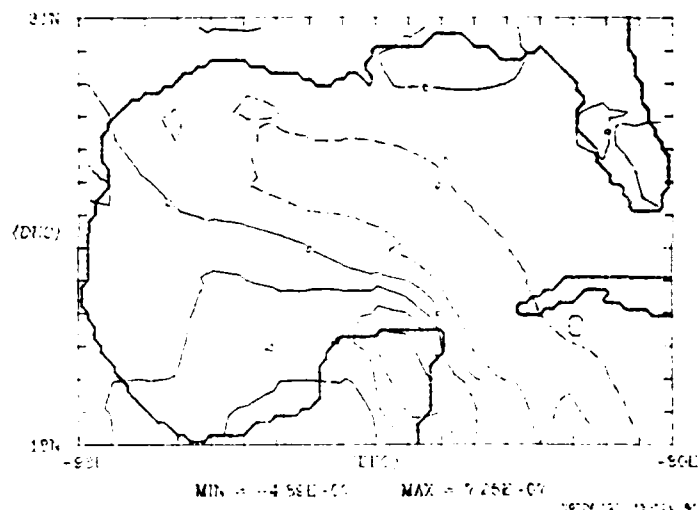
WIND STRESS CURL
APRIL/1975 DC = 2.00E-07 MKS



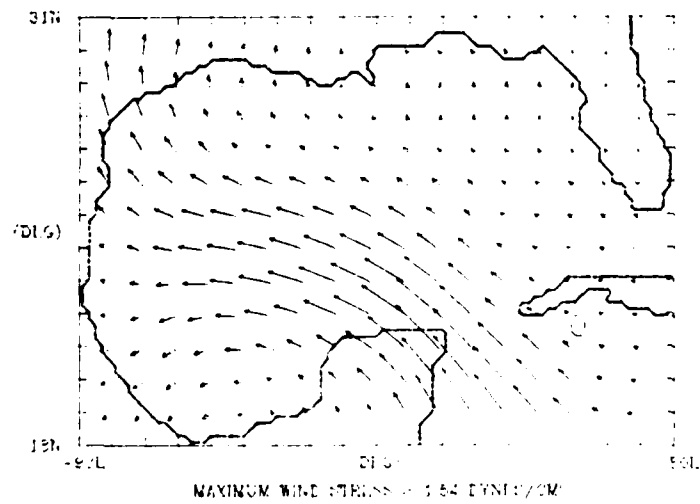
WIND STRESS
MAY/1975



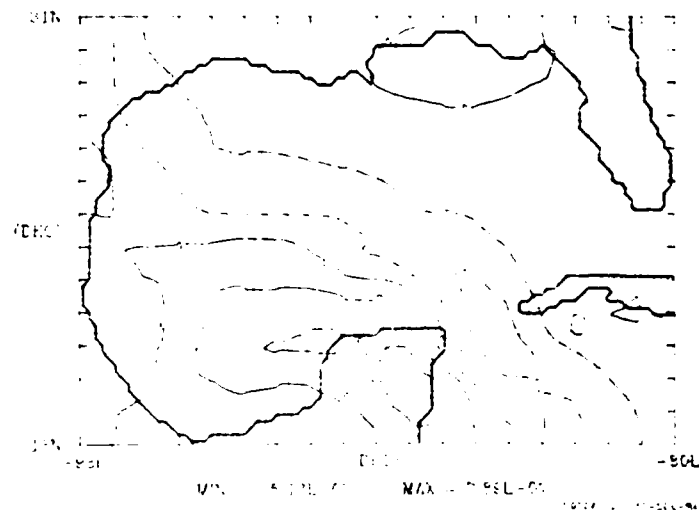
WIND STRESS CURL
MAY/1975 DC = 2.00E-07 MKS



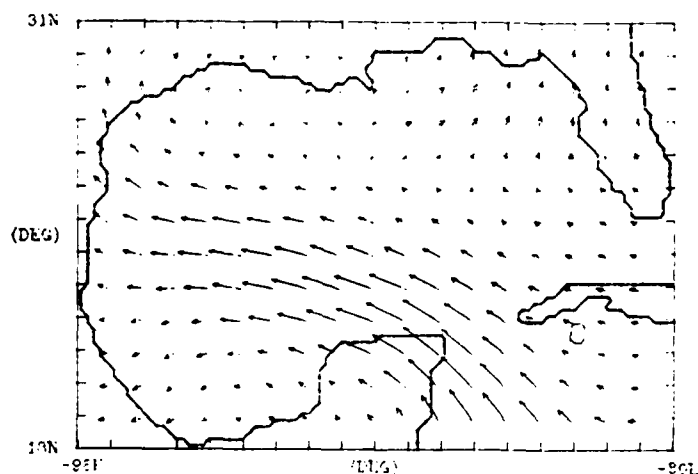
WIND STRESS
JUNE/1975



WIND STRESS CURL
JUNE/1975 DC = 2.00E-07 MKS

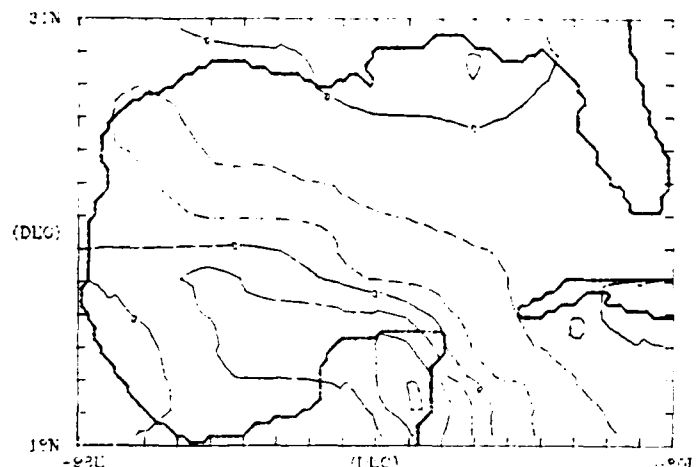


WIND STRESS
JULY/1975



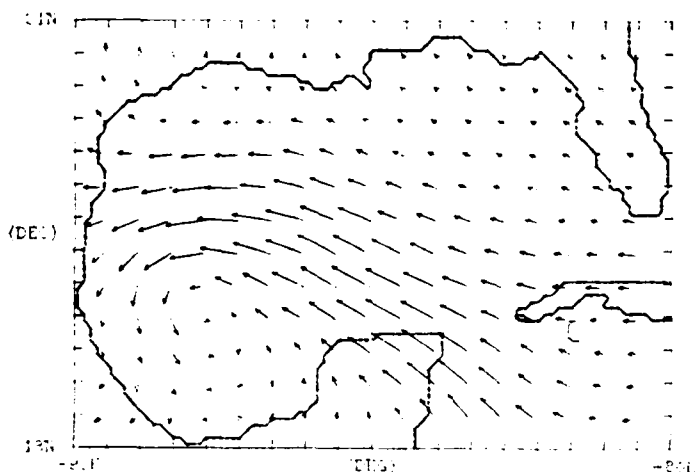
MAXIMUM WIND STRESS = 1.09 DYNES/CM²
NOTES: 1. 10-15 24

WIND STRESS CURL
JULY/1975 DC = 2.0E+00 MBS



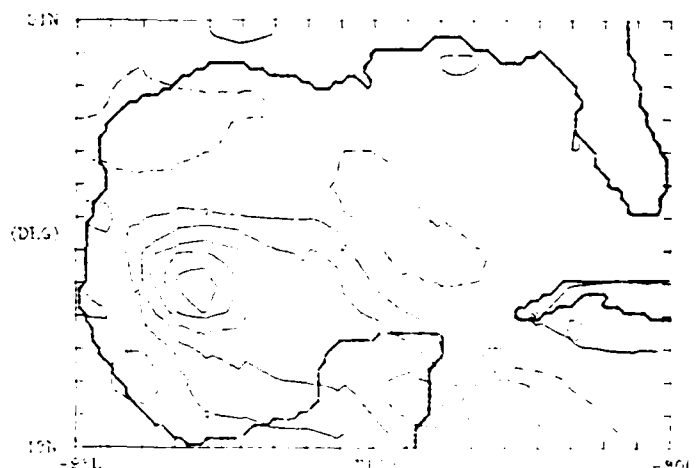
MIN = -2.50E+00 MAX = 6.21E+00
NOTES: 1. 10-15 24

WIND STRESS
AUGUST/1975



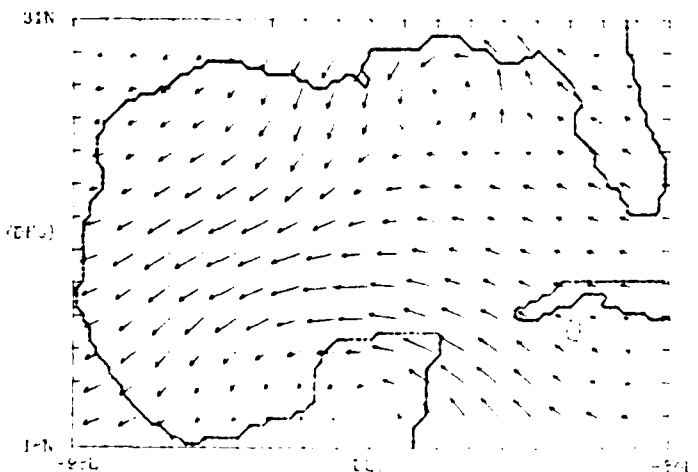
MAXIMUM WIND STRESS = 1.09 DYNES/CM²
NOTES: 1. 10-15 24

WIND STRESS CURL
AUGUST/1975 DC = 2.0E+00 MBS



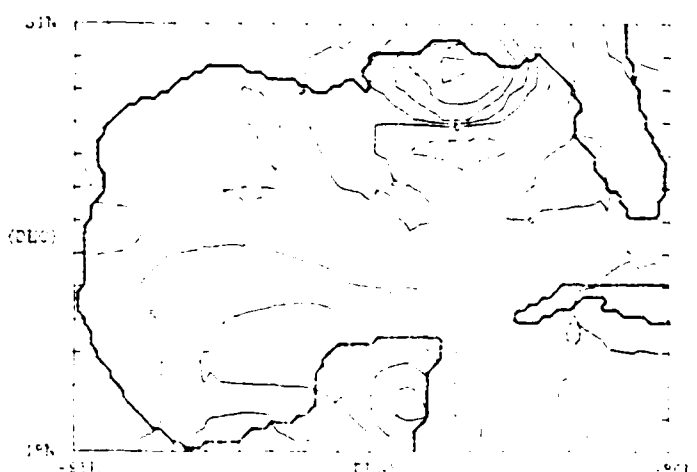
MIN = -4.00E+00 MAX = 8.92E+00
NOTES: 1. 10-15 24

WIND STRESS
SEPTEMBER/1975



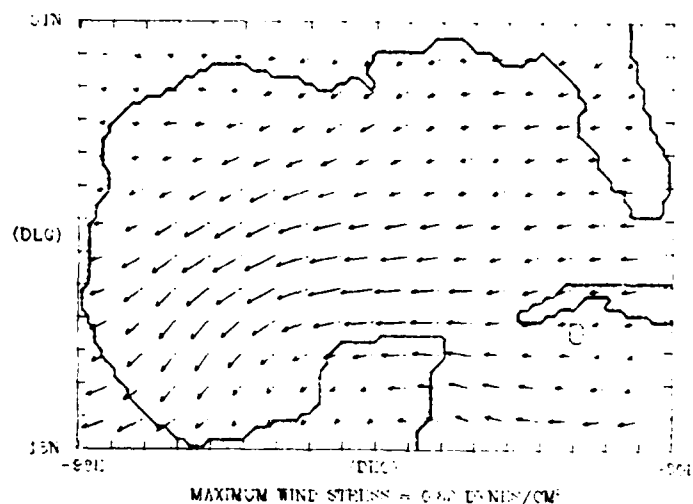
MAXIMUM WIND STRESS = 0.96 DYNES/CM²
NOTES: 1. 10-15 24

WIND STRESS CURL
SEPTEMBER/1975 DC = 2.0E+00 MBS

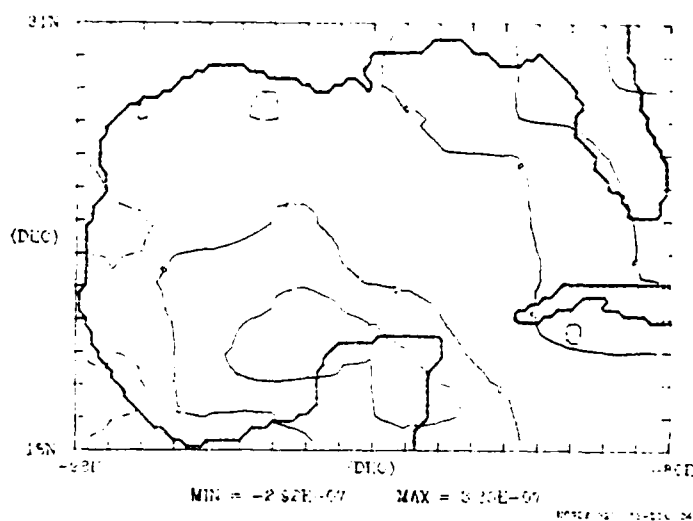


MIN = -2.95E+00 MAX = 7.05E+00
NOTES: 1. 10-15 24

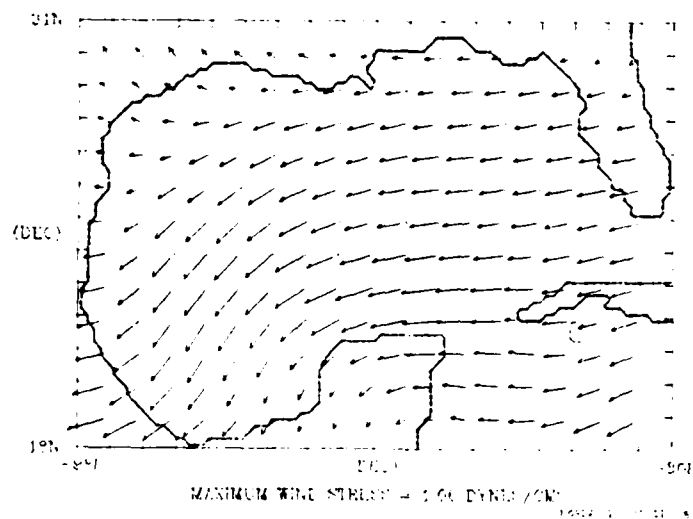
WIND STRESS
OCTOBER/1975



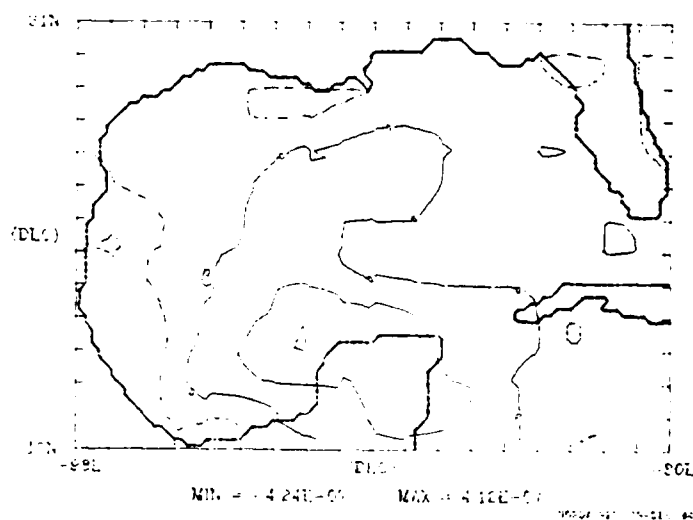
WIND STRESS CURL
OCTOBER/1975 DC = 2.0E-07 MBS



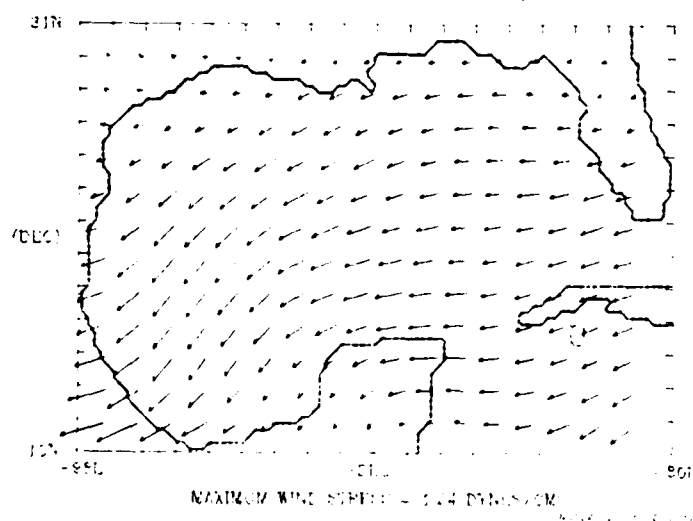
WIND STRESS
NOVEMBER/1975



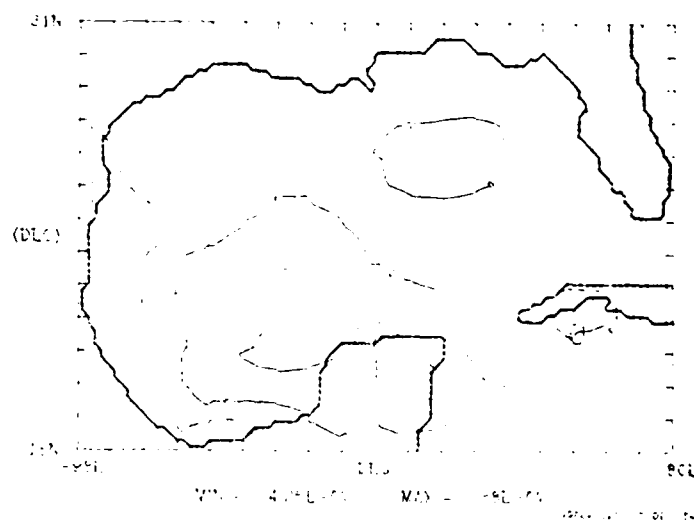
WIND STRESS CURL
NOVEMBER/1975 DC = 2.0E-07 MBS



WIND STRESS
DECEMBER/1975



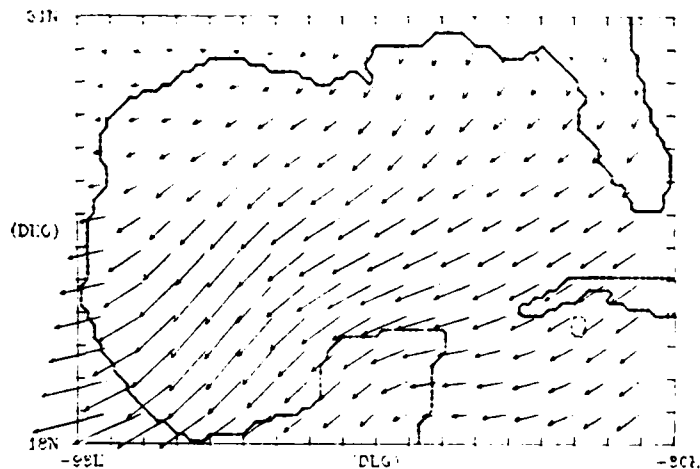
WIND STRESS CURL
DECEMBER/1975 DC = 2.0E-07 MBS



WIND STRESS

JANUARY/1976

10

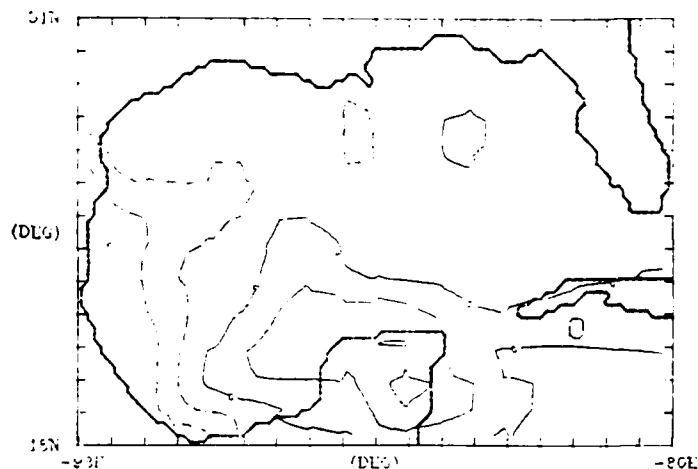


MAXIMUM WIND STRESS = 1.98 DYNES/CM

NOAA/PMEL/NOAA

WIND STRESS CURL

JANUARY/1976 $DC = 2.0E-07 \text{ MPa}$



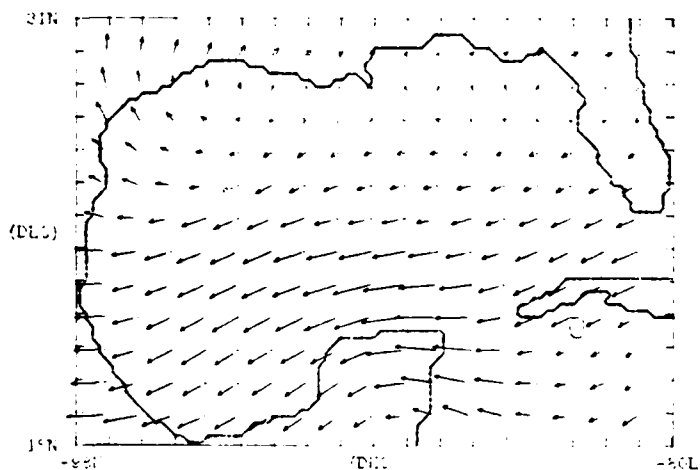
MIN = -6.0E-07 MAX = 4.56E-07

NOAA/PMEL/NOAA

WIND STRESS

FEBRUARY/1976

10

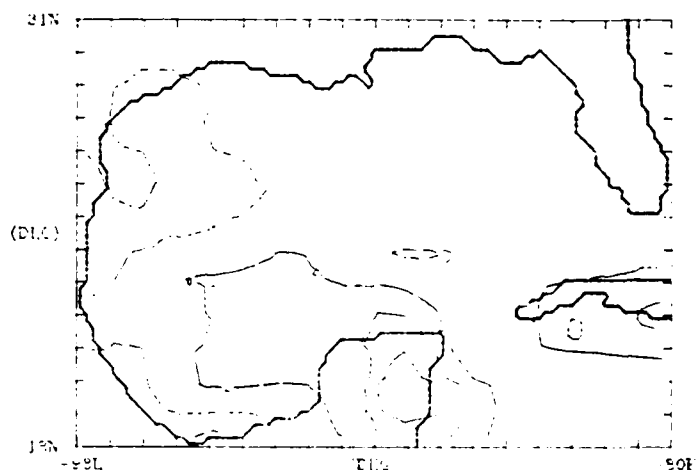


MAXIMUM WIND STRESS = 1.65 DYNES/CM

NOAA/PMEL/NOAA

WIND STRESS CURL

FEBRUARY/1976 $DC = 2.0E-07 \text{ MPa}$



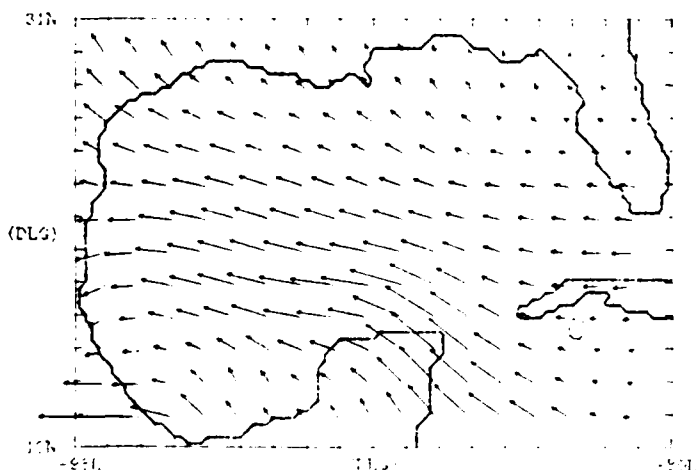
MIN = -4.4E-07 MAX = 5.5E-07

NOAA/PMEL/NOAA

WIND STRESS

MARCH/1976

10

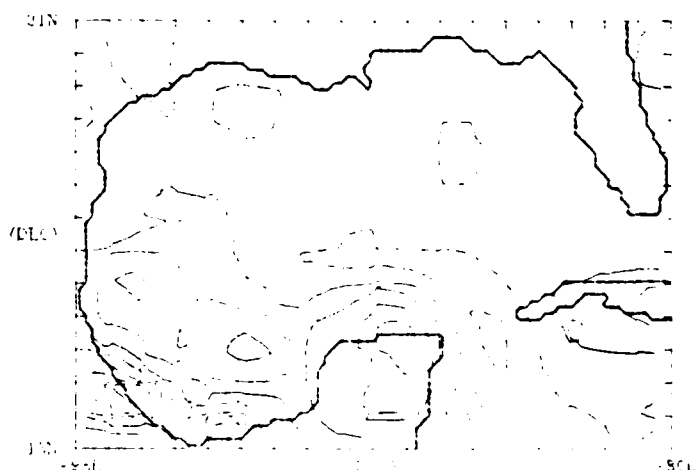


MAXIMUM WIND STRESS = 1.64 DYNES/CM

NOAA/PMEL/NOAA

WIND STRESS CURL

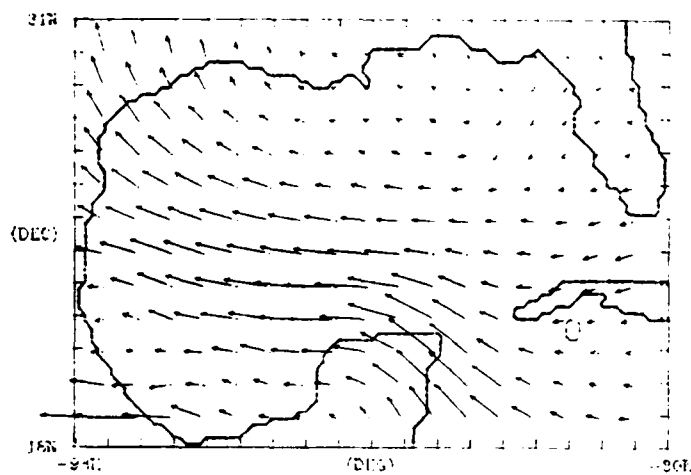
MARCH/1976 $DC = 2.0E-07 \text{ MPa}$



MIN = -3.0E-07 MAX = 7.0E-07

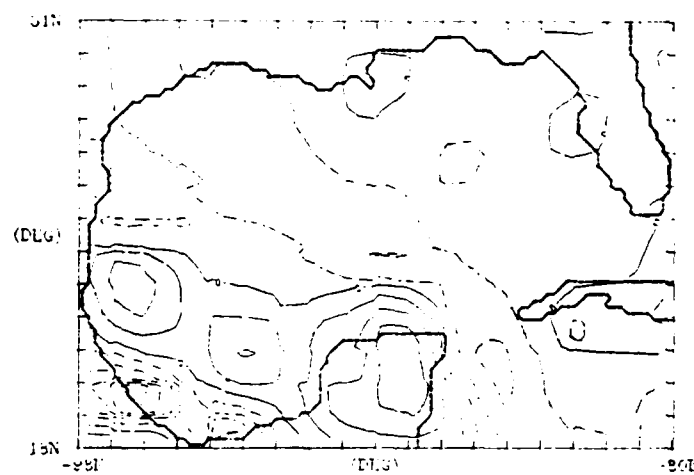
NOAA/PMEL/NOAA

WIND STRESS
APRIL/1976



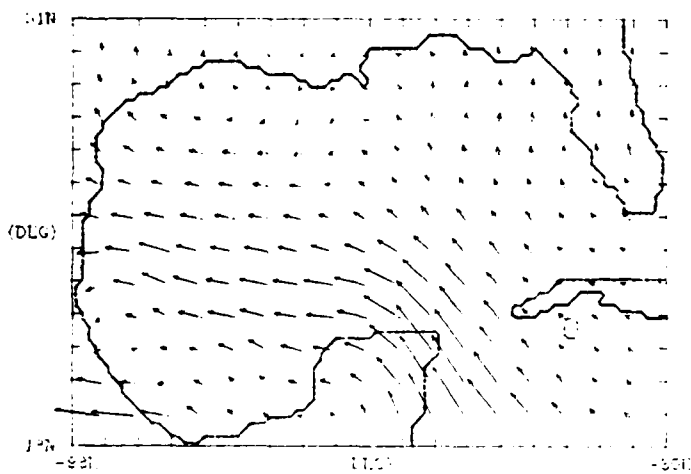
MAXIMUM WIND STRESS = 1.61 DYNES/CM²

WIND STRESS CURL
APRIL/1976 DC = 2.0L-CY MRS



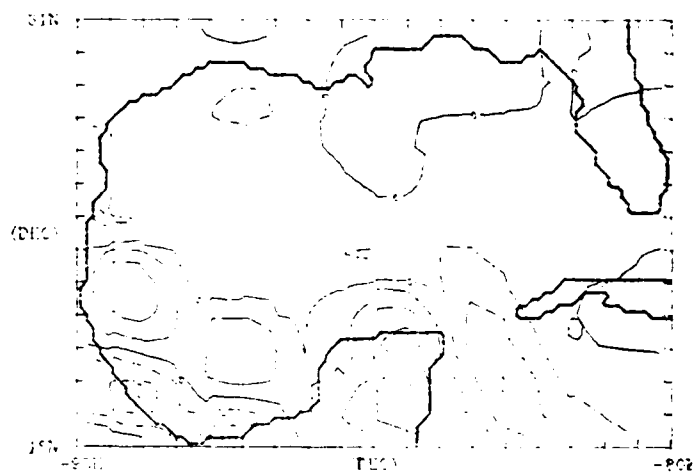
MIN = -1.0E-05 MAX = 7.51E-05

WIND STRESS
MAY/1976



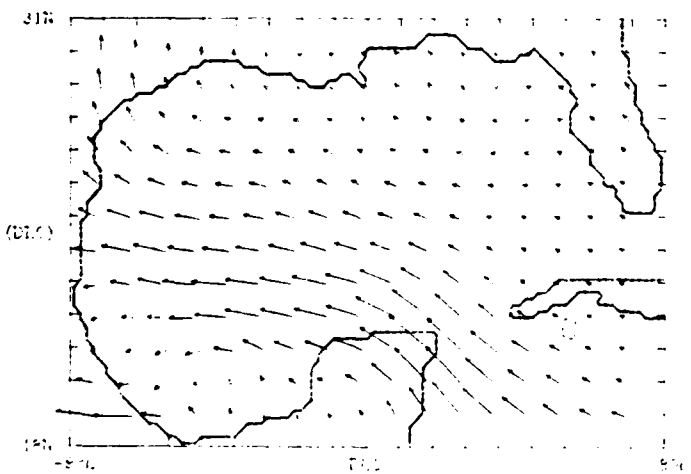
MAXIMUM WIND STRESS = 1.45 DYNES/CM²

WIND STRESS CURL
MAY/1976 DC = 2.0L-CY MRS



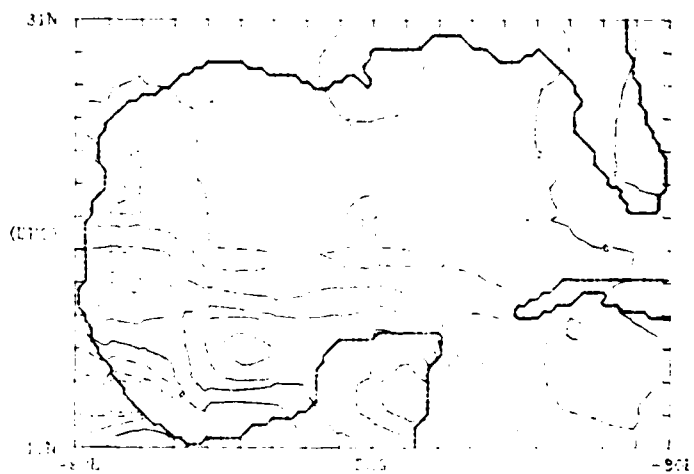
MIN = -8.10E-05 MAX = 6.51E-05

WIND STRESS
JUNE/1976

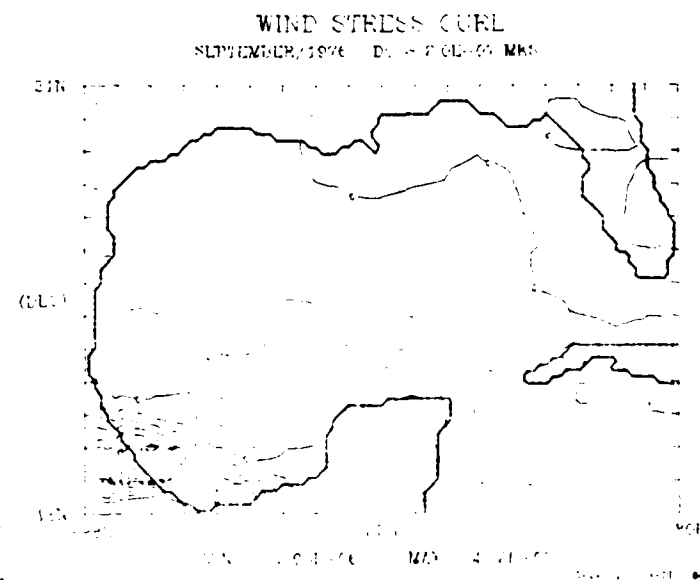
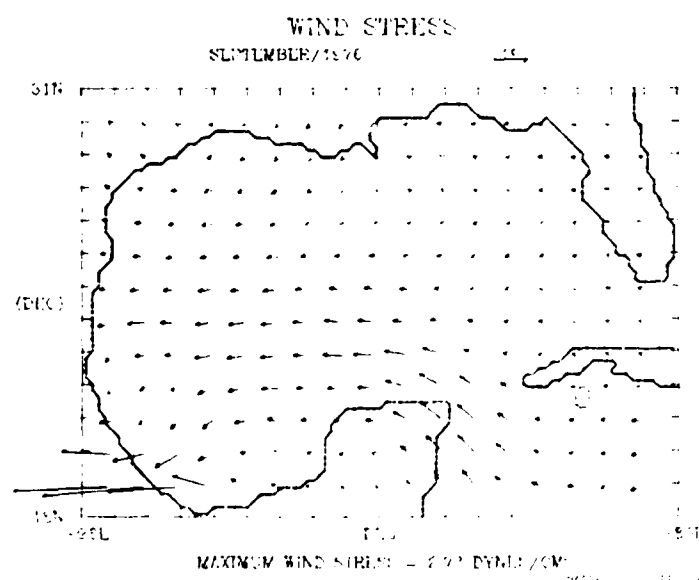
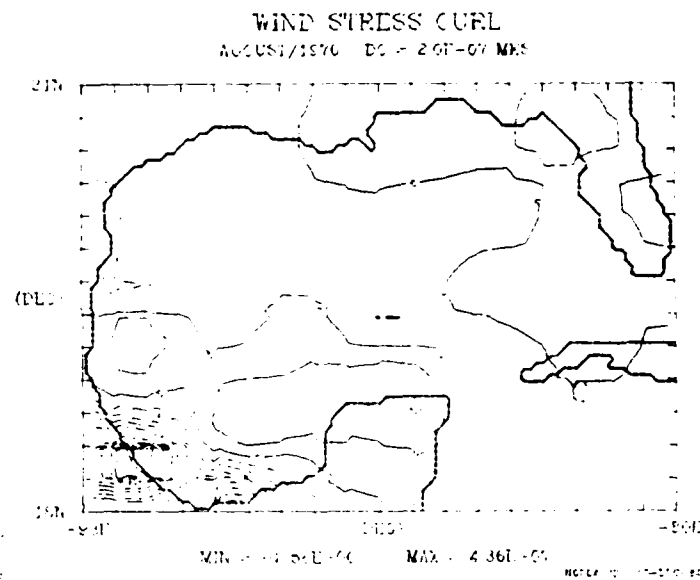
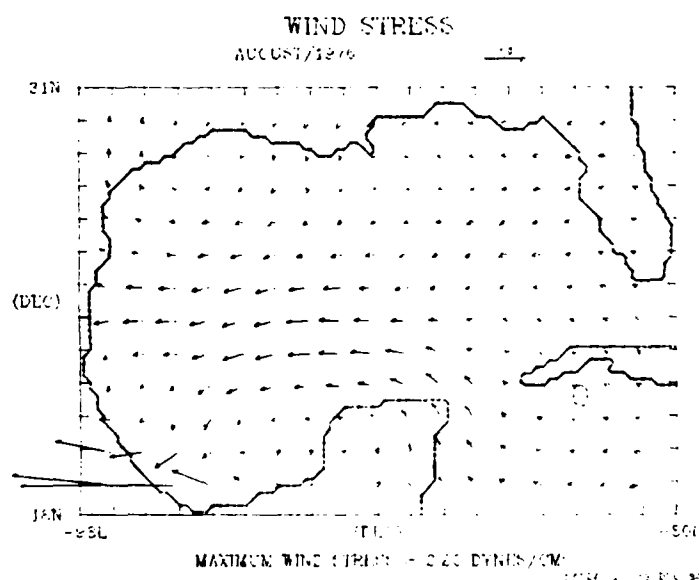
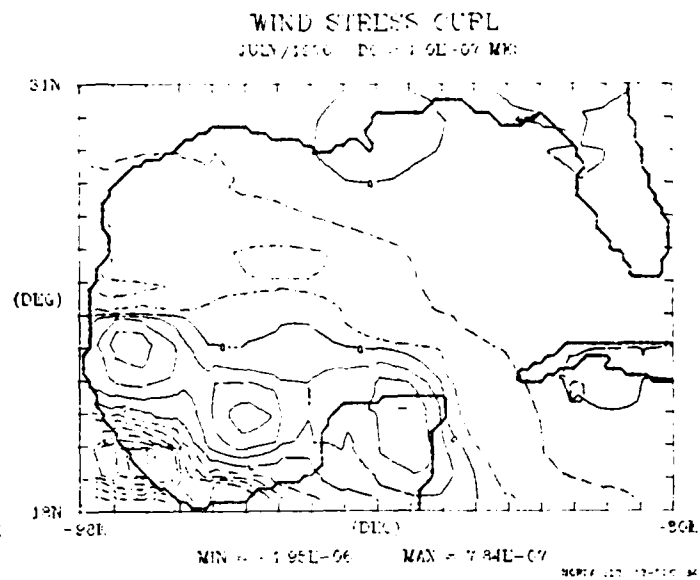
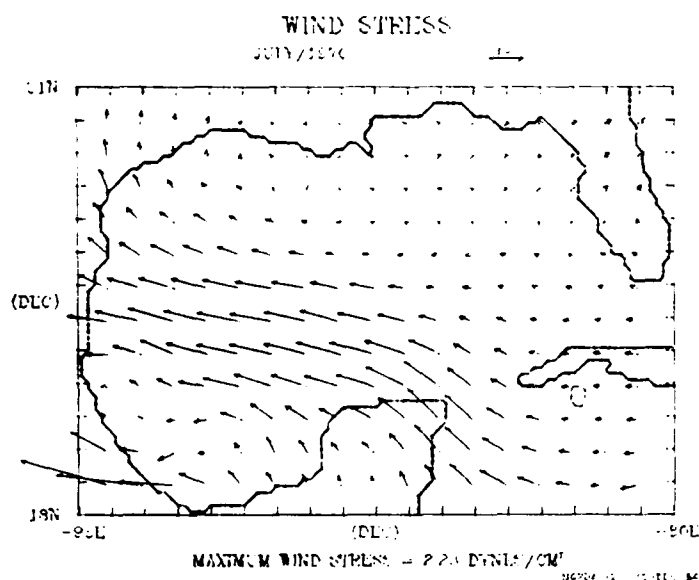


MAXIMUM WIND STRESS = 1.36 DYNES/CM²

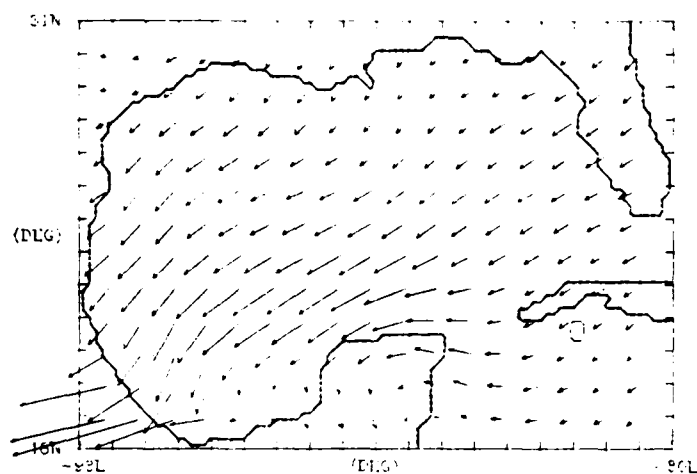
WIND STRESS CURL
JUNE/1976 DC = 2.0L-CY MRS



MIN = -7.4E-05 MAX = 7.81E-05



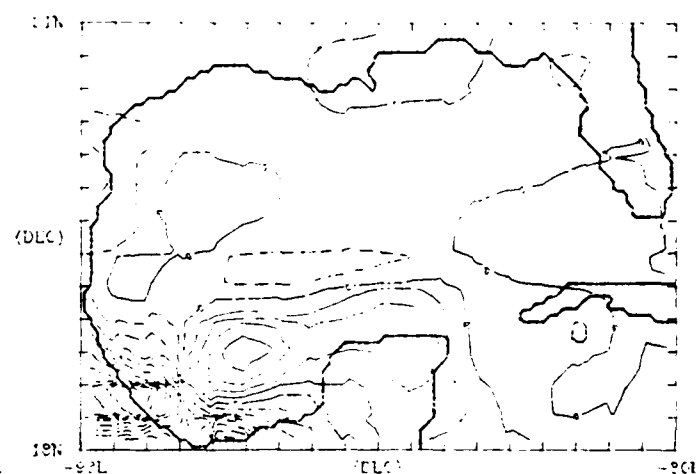
WIND STRESS
OCTOBER/1976



MAXIMUM WIND STRESS = 5.95 DYNES/CM²

NOVEMBER 1976

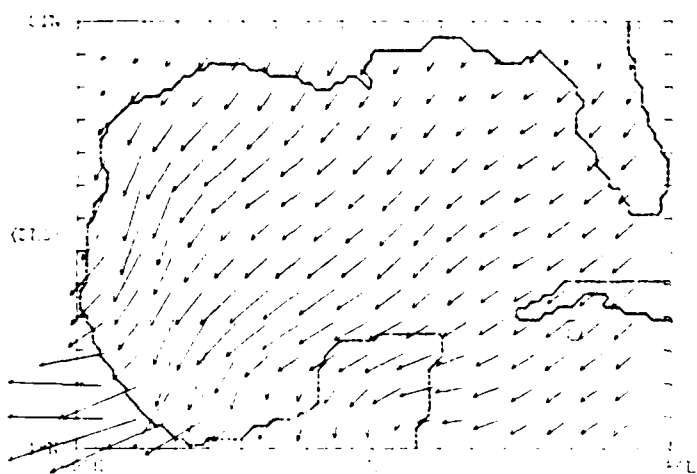
WIND STRESS CURL
OCTOBER/1976 DC = 0.00-0.01 MKS



MIN = -0.71E-06 MAX = 0.00E-06

NOVEMBER 1976

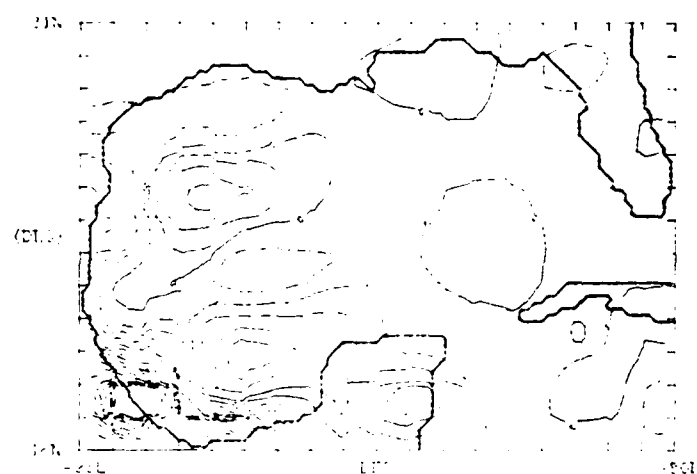
WIND STRESS
NOVEMBER/1976



MAXIMUM WIND STRESS = 6.10 DYNES/CM²

NOVEMBER 1976

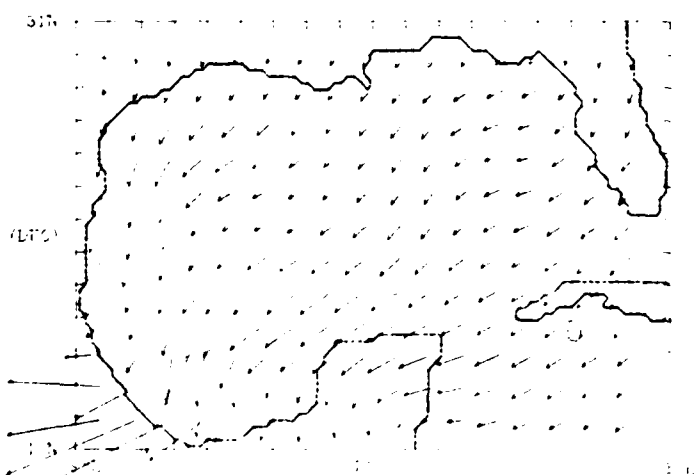
WIND STRESS CURL
NOVEMBER/1976 DC = 0.00-0.01 MKS



MIN = -0.89E-06 MAX = 0.00E-06

NOVEMBER 1976

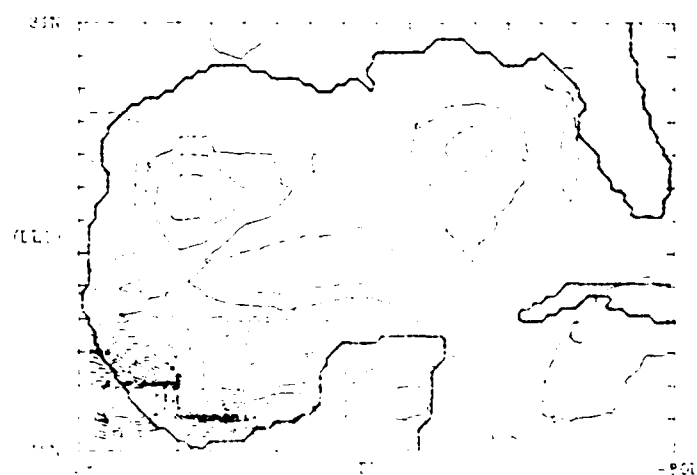
WIND STRESS
DECEMBER/1976



MAXIMUM WIND STRESS = 6.01 DYNES/CM²

DECEMBER 1976

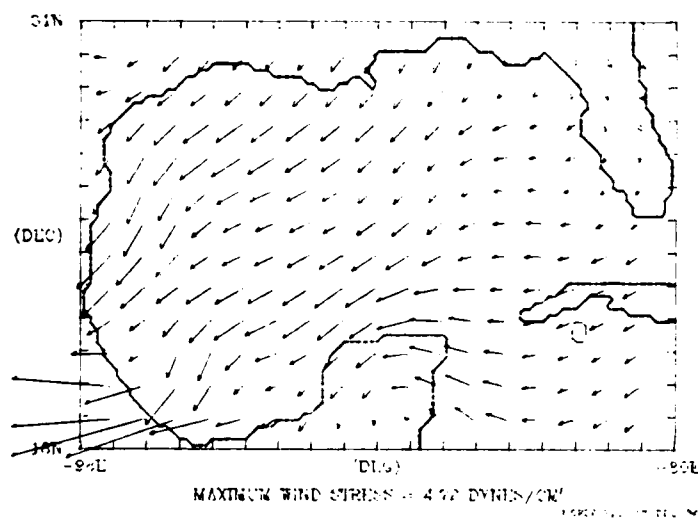
WIND STRESS CURL
DECEMBER/1976 DC = 0.00-0.01 MKS



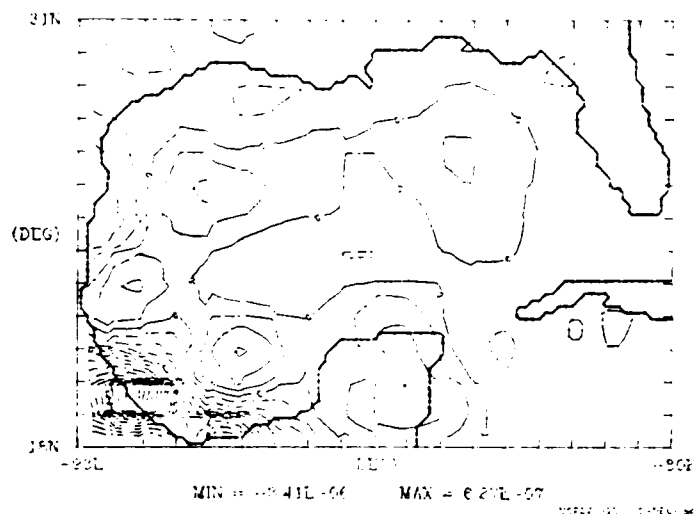
MIN = -4.41E-06 MAX = 0.00E-06

DECEMBER 1976

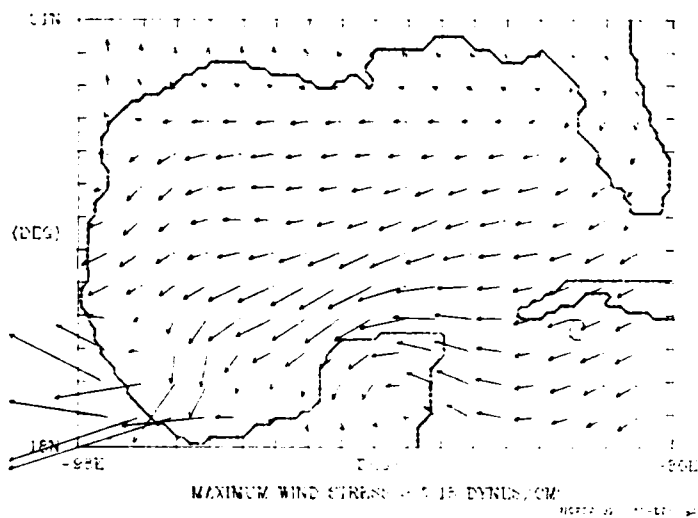
WIND STRESS
JANUARY/1977



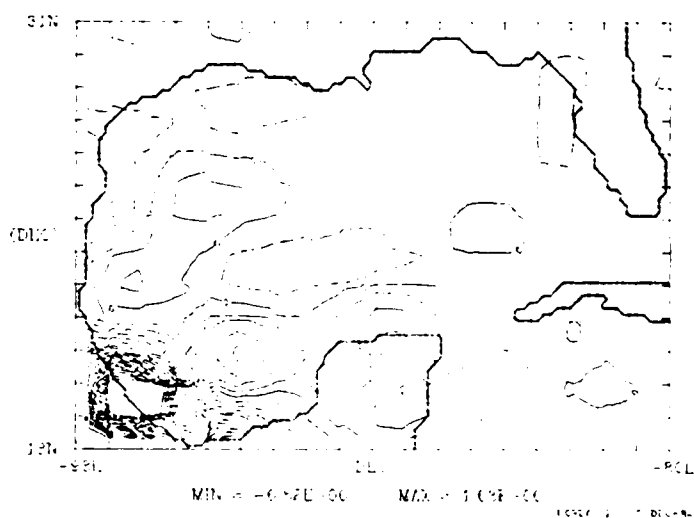
WIND STRESS CURL
JANUARY/1977 10^{-6} $2.0E-07$ MPB



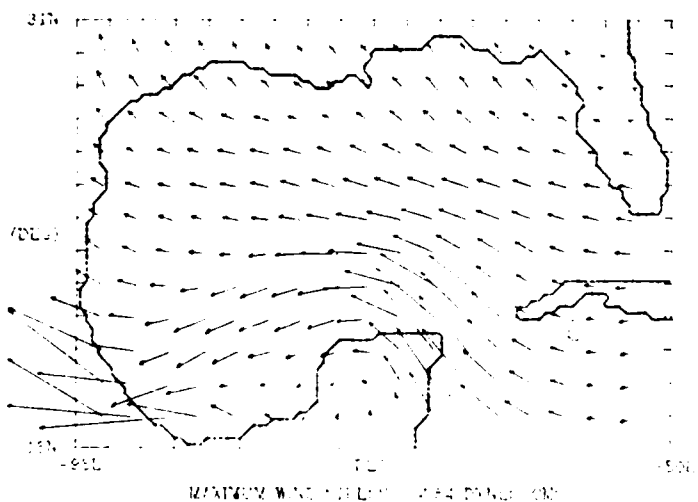
WIND STRESS
FEBRUARY/1977



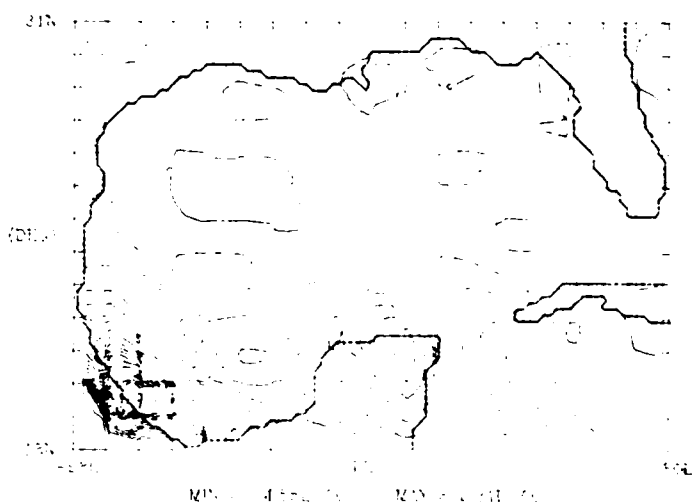
WIND STRESS CURL
FEBRUARY/1977 10^{-6} $2.0E-07$ MPB



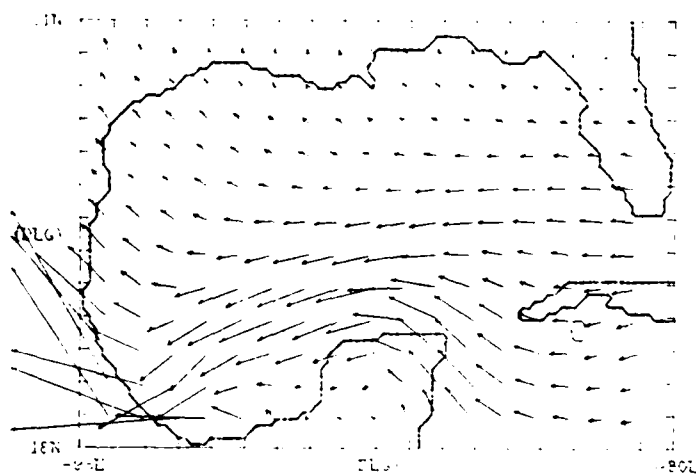
WIND STRESS
MARCH/1977



WIND STRESS CURL
MARCH/1977 10^{-6} $2.0E-07$ MPB



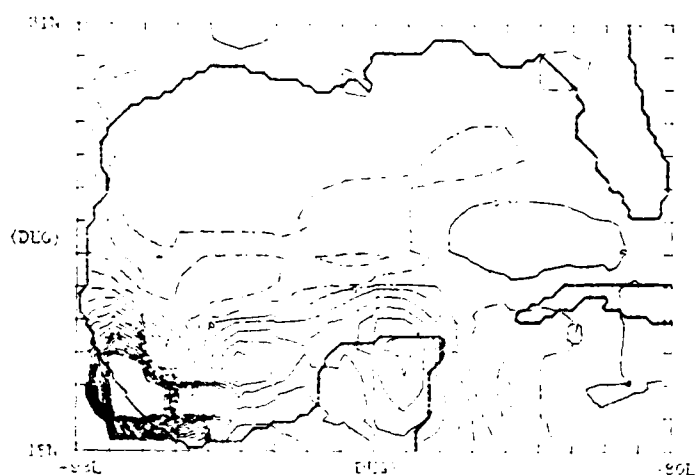
WIND STRESS
APRIL 1971



MAXIMUM WIND STRESS = 7.46 DYNES/CM²

NOAA/PMEL/NOAA

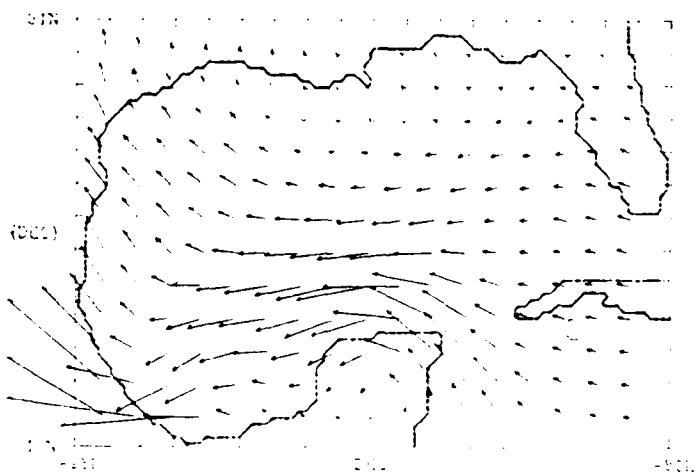
WIND STRESS CURL
APRIL 1971 10^{-6} COE/CM²



MIN = -2.20 COE/CM² MAX = 2.35 COE/CM²

NOAA/PMEL/NOAA

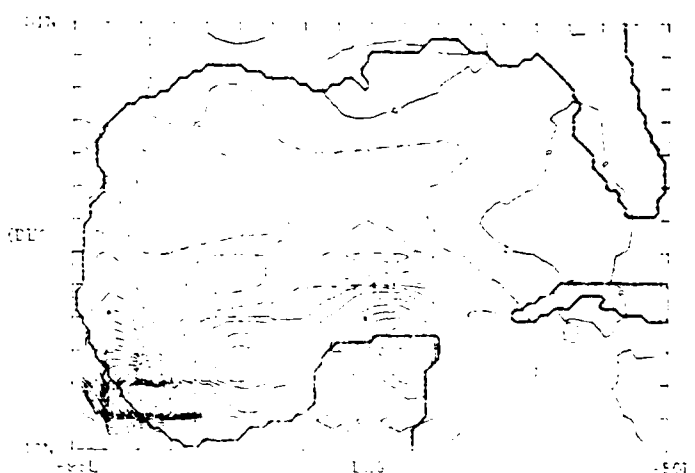
WIND STRESS
MAY 1971



MAXIMUM WIND STRESS = 5.15 DYNES/CM²

NOAA/PMEL/NOAA

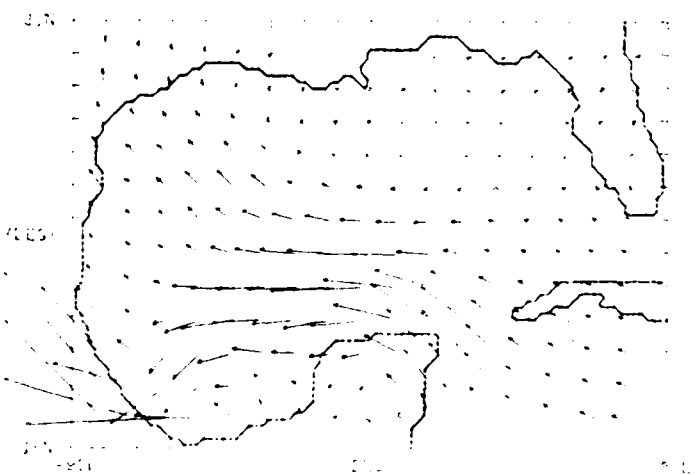
WIND STRESS CURL
MAY 1971 10^{-6} COE/CM²



MIN = -4.40 COE/CM² MAX = 2.00 COE/CM²

NOAA/PMEL/NOAA

WIND STRESS
JUNE 1971



MAXIMUM WIND STRESS = 5.15 DYNES/CM²

NOAA/PMEL/NOAA

WIND STRESS CURL
JUNE 1971 10^{-6} COE/CM²



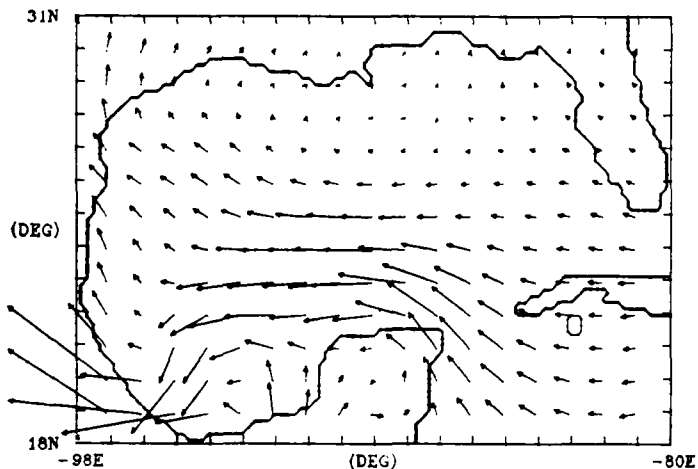
MIN = -4.40 COE/CM² MAX = 2.00 COE/CM²

NOAA/PMEL/NOAA

WIND STRESS

JULY/1977

10

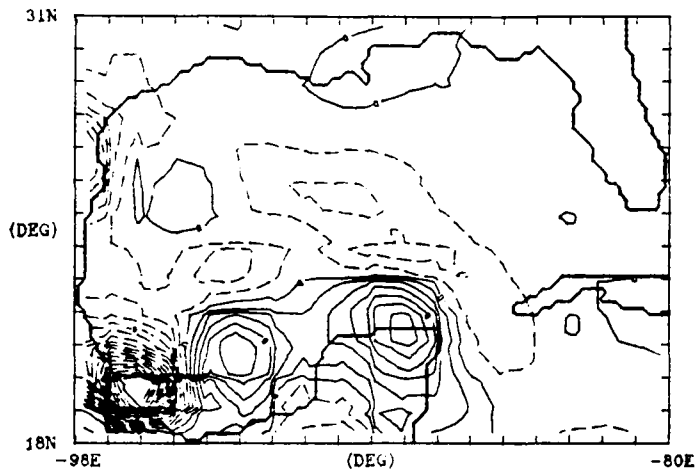


MAXIMUM WIND STRESS = 4.25 DYNES/CM²

NORDA 327 13-DEC-84

WIND STRESS CURL

JULY/1977 DC = 2.0E-07 MKS



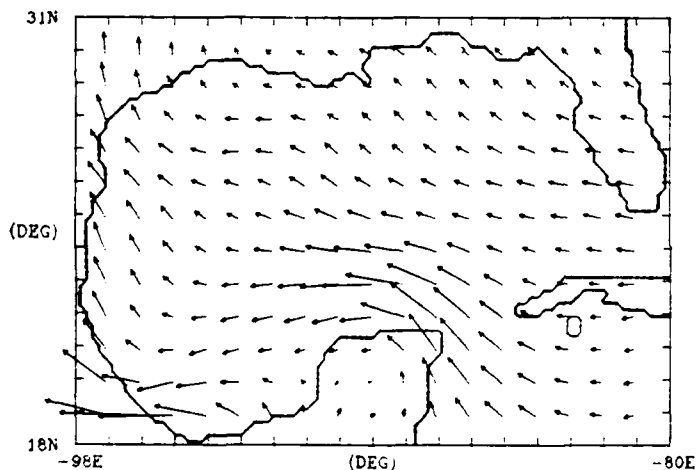
MIN = -5.08E-06 MAX = 1.79E-06

NORDA 327 13-DEC-84

WIND STRESS

AUGUST/1977

10

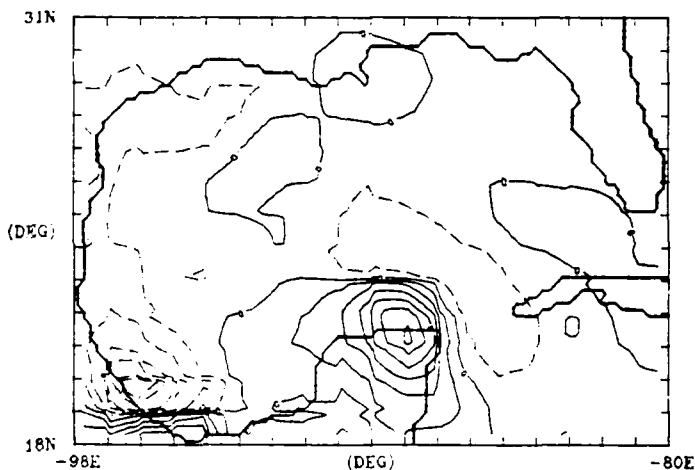


MAXIMUM WIND STRESS = 1.96 DYNES/CM²

NORDA 327 13-DEC-84

WIND STRESS CURL

AUGUST/1977 DC = 2.0E-07 MKS



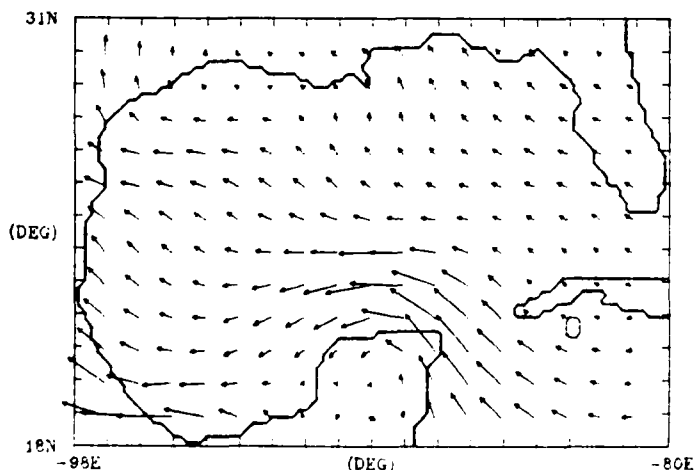
MIN = -2.04E-06 MAX = 1.25E-06

NORDA 327 13-DEC-84

WIND STRESS

SEPTEMBER/1977

10

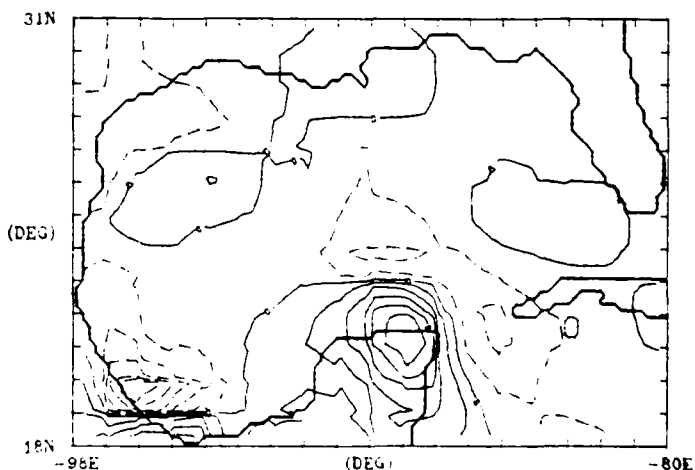


MAXIMUM WIND STRESS = 1.40 DYNES/CM²

NORDA 327 13-DEC-84

WIND STRESS CURL

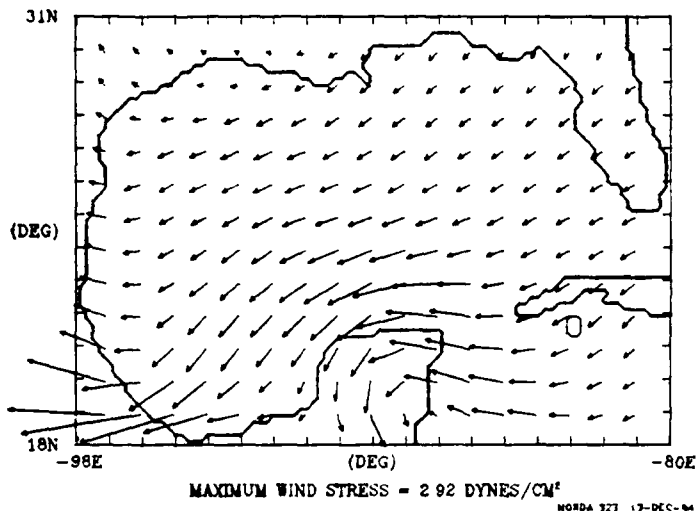
SEPTEMBER/1977 DC = 2.0E-07 MKS



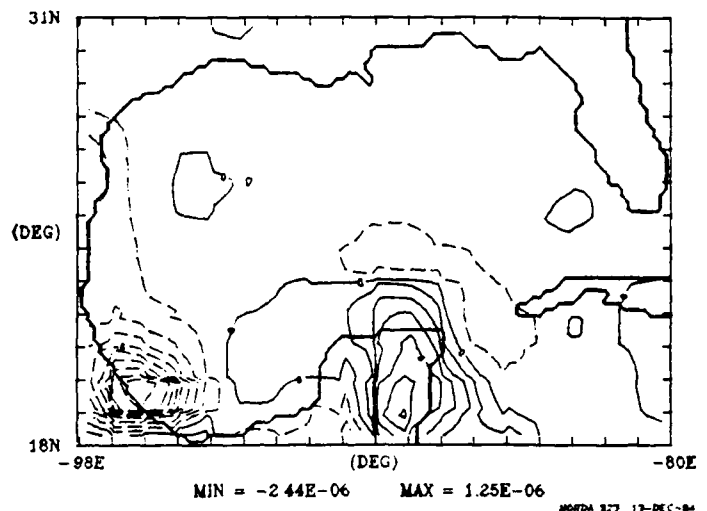
MIN = -1.33E-06 MAX = 1.30E-06

NORDA 327 13-DEC-84

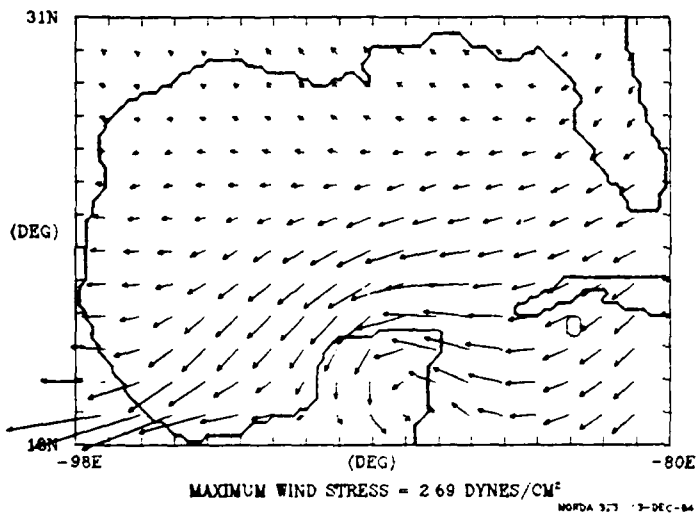
WIND STRESS
OCTOBER/1977



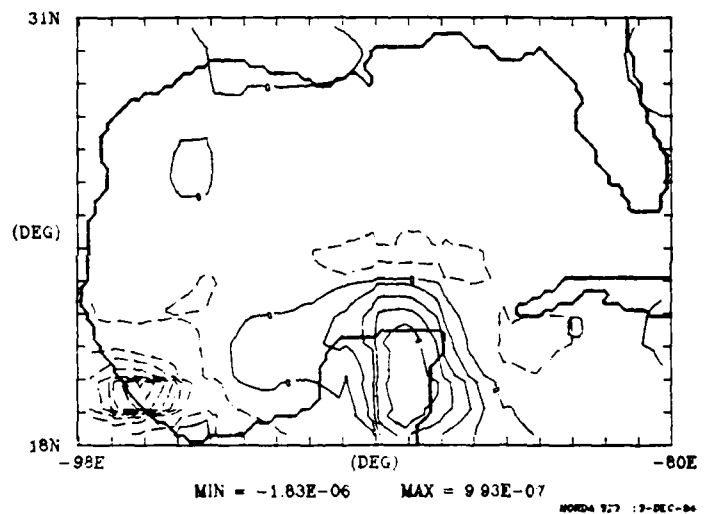
WIND STRESS CURL
OCTOBER/1977 DC = 2.0E-07 MKS



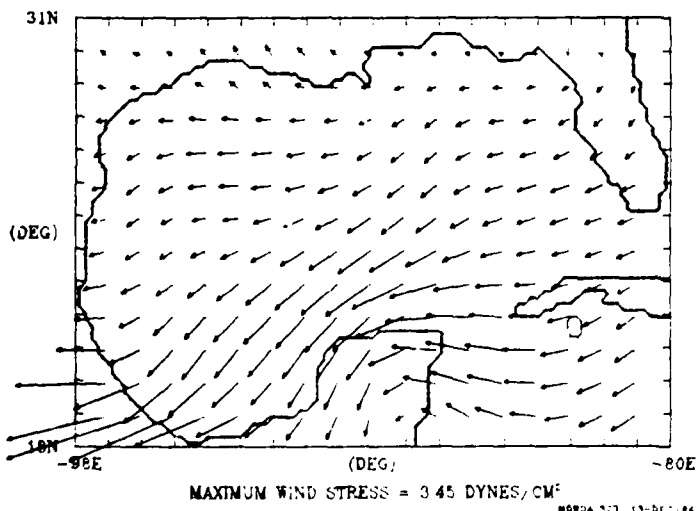
WIND STRESS
NOVEMBER/1977



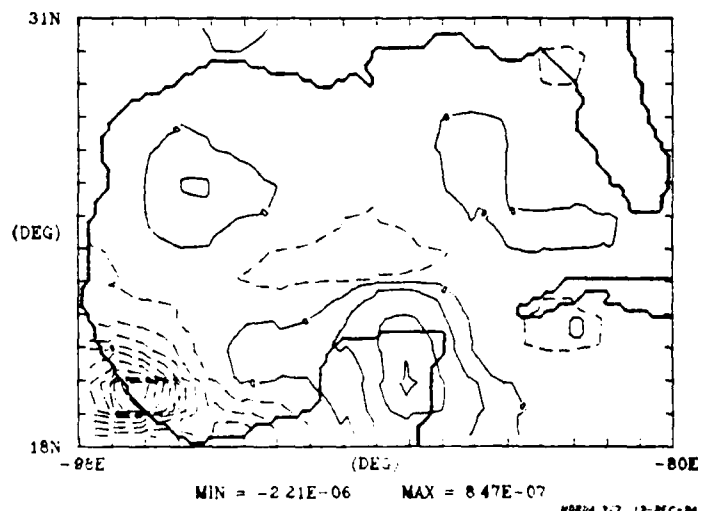
WIND STRESS CURL
NOVEMBER/1977 DC = 2.0E-07 MKS



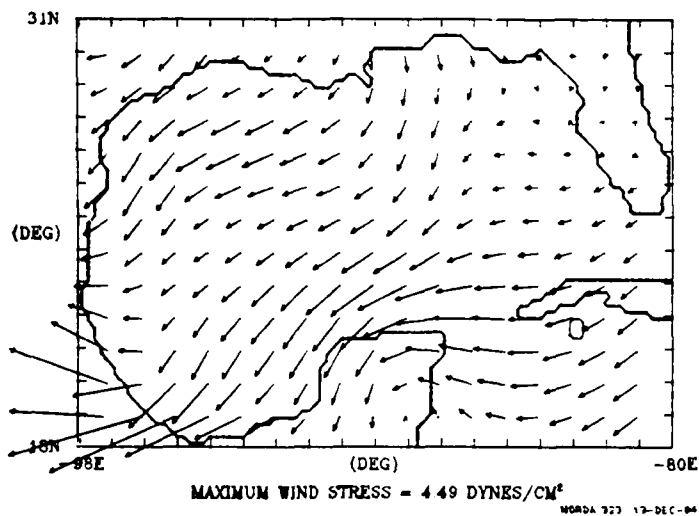
WIND STRESS
DECEMBER/1977



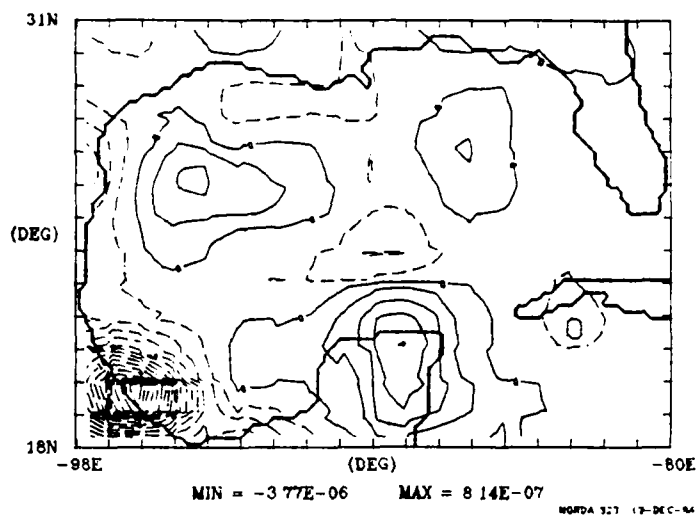
WIND STRESS CURL
DECEMBER/1977 DC = 2.0E-07 MKS



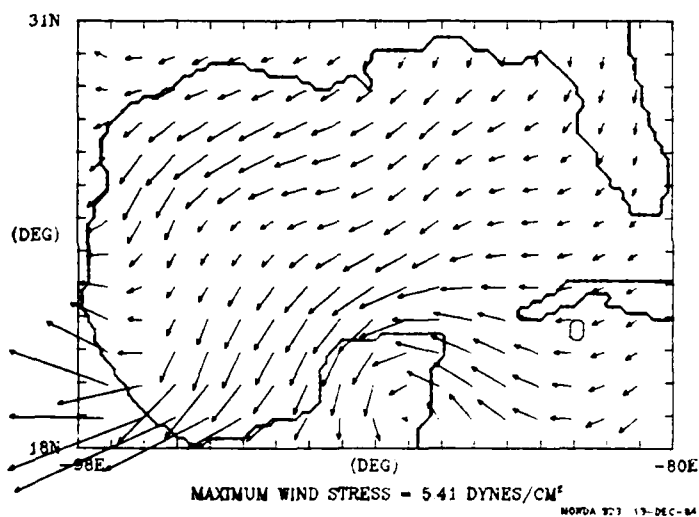
WIND STRESS
JANUARY/1978



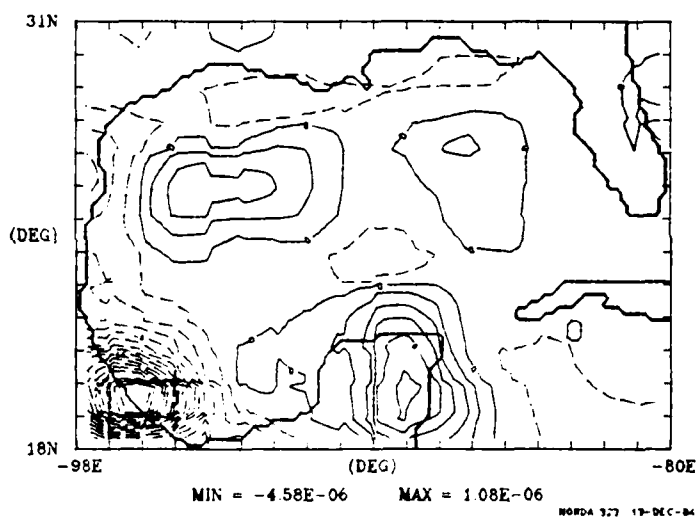
WIND STRESS CURL
JANUARY/1978 DC = 2.0E-07 MKS



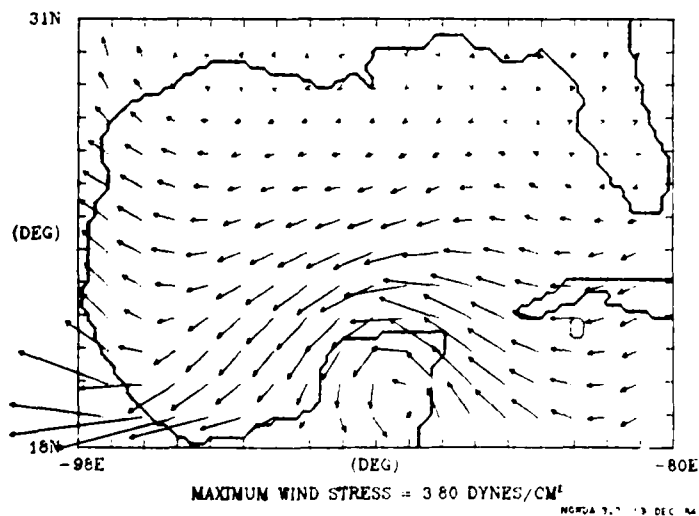
WIND STRESS
FEBRUARY/1978



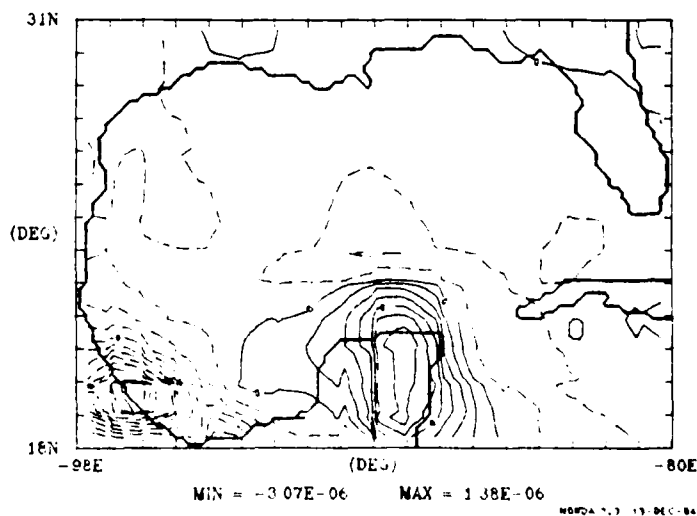
WIND STRESS CURL
FEBRUARY/1978 DC = 2.0E-07 MKS



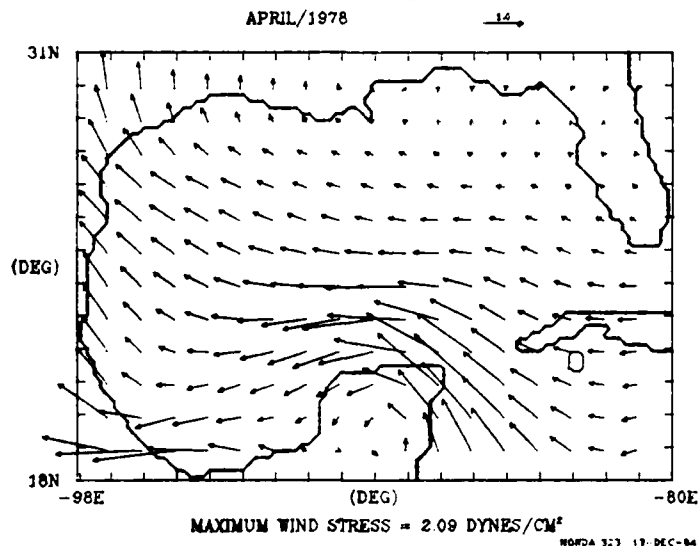
WIND STRESS
MARCH/1978



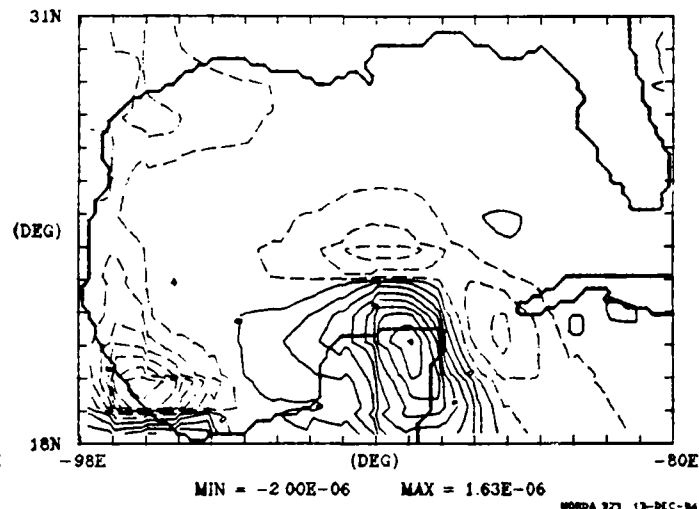
WIND STRESS CURL
MARCH/1978 DC = 2.0E-07 MKS



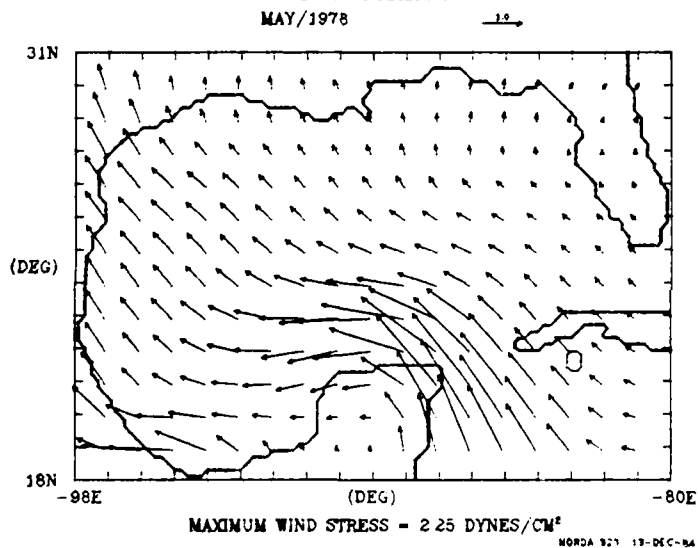
WIND STRESS
APRIL/1978



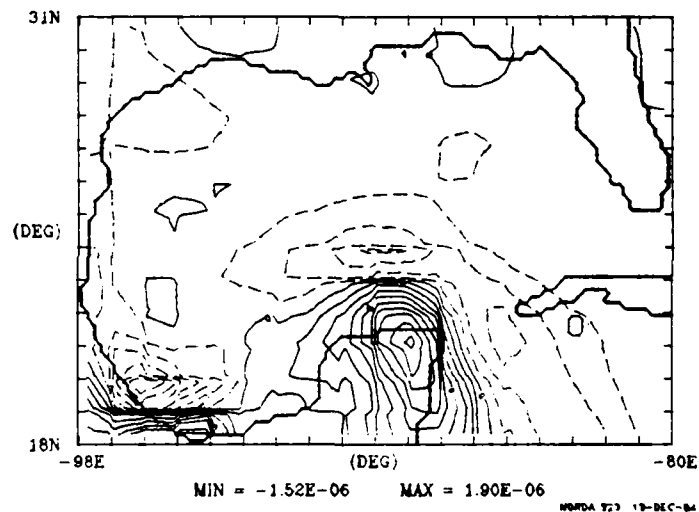
WIND STRESS CURL
APRIL/1978 DC = 2.0E-07 MKS



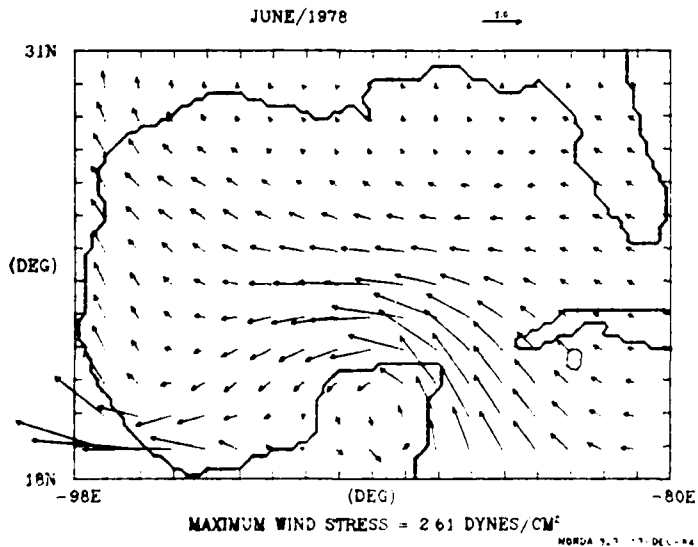
WIND STRESS
MAY/1978



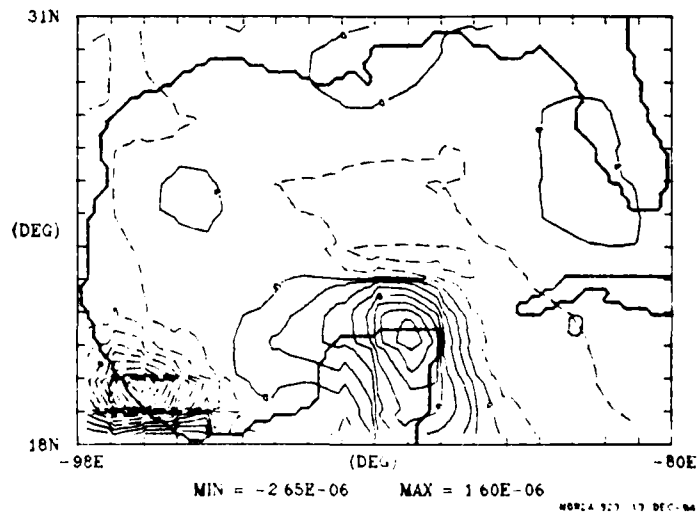
WIND STRESS CURL
MAY/1978 DC = 2.0E-07 MKS



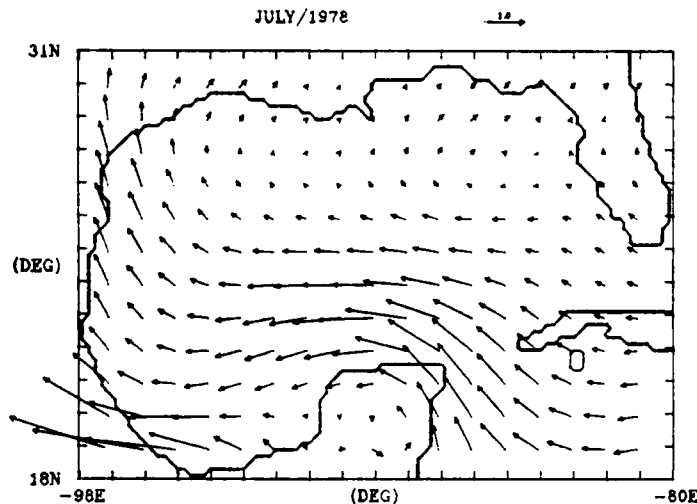
WIND STRESS
JUNE/1978



WIND STRESS CURL
JUNE/1978 DC = 2.0E-07 MKS

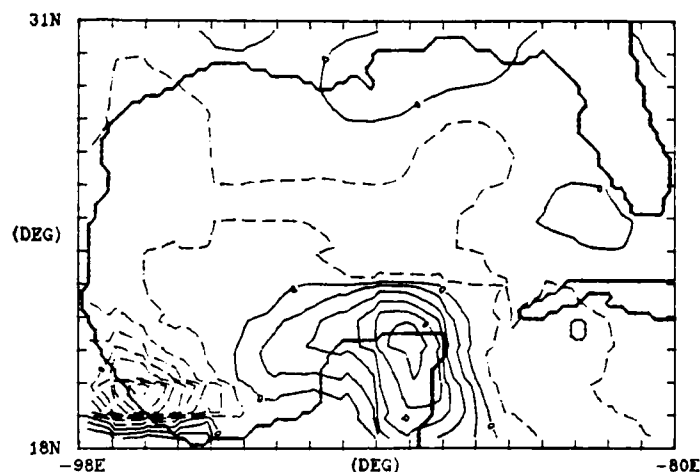


WIND STRESS
JULY/1978



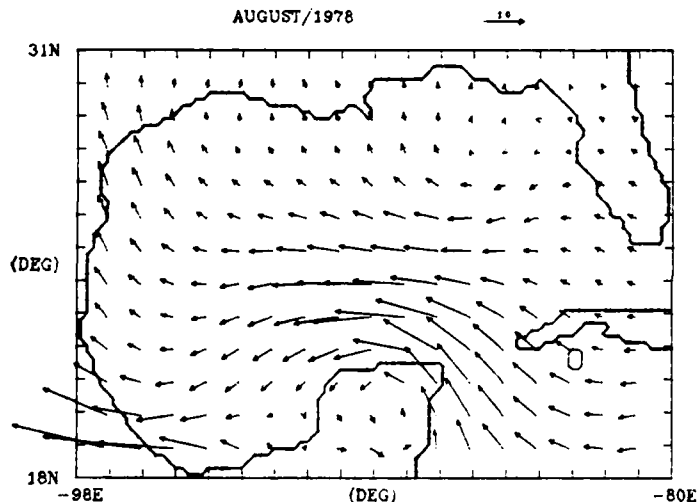
MAXIMUM WIND STRESS = 2.72 DYNES/CM²
MORDA 927 13-DEC-84

WIND STRESS CURL
JULY/1978 DC = 2.0E-07 MKS



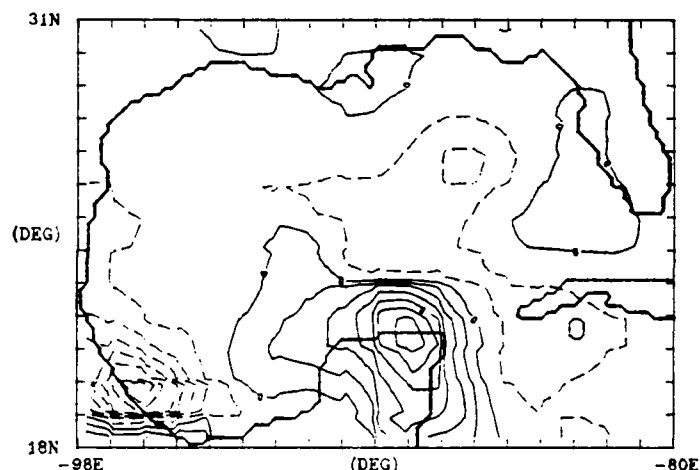
MIN = -2.24E-06 MAX = 1.19E-06
MORDA 927 13-DEC-84

WIND STRESS
AUGUST/1978



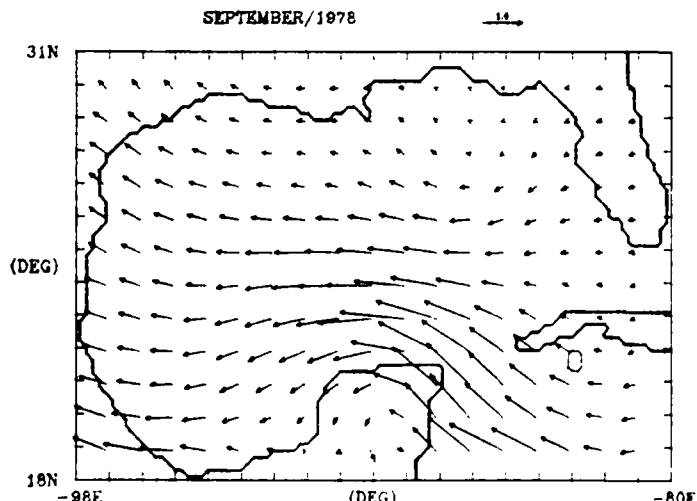
MAXIMUM WIND STRESS = 2.39 DYNES/CM²
MORDA 927 13-DEC-84

WIND STRESS CURL
AUGUST/1978 DC = 2.0E-07 MKS



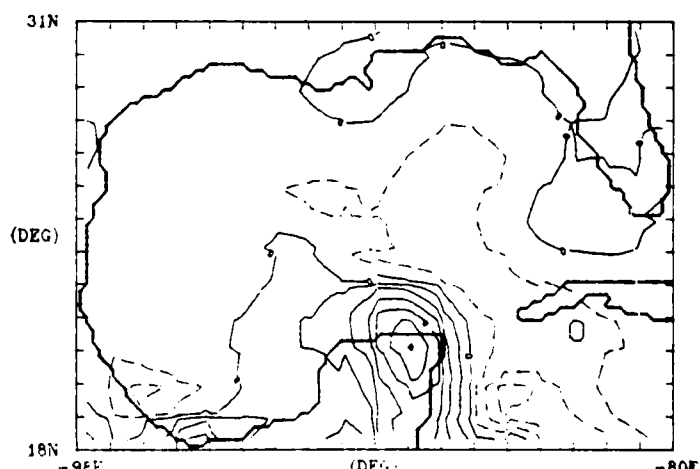
MIN = -1.90E-06 MAX = 1.38E-06
MORDA 927 13-DEC-84

WIND STRESS
SEPTEMBER/1978



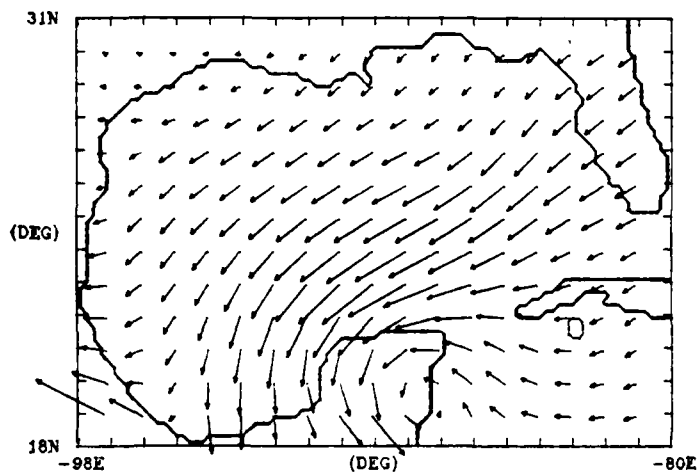
MAXIMUM WIND STRESS = 1.60 DYNES/CM²
MORDA 927 13-DEC-84

WIND STRESS CURL
SEPTEMBER/1978 DC = 2.0E-07 MKS



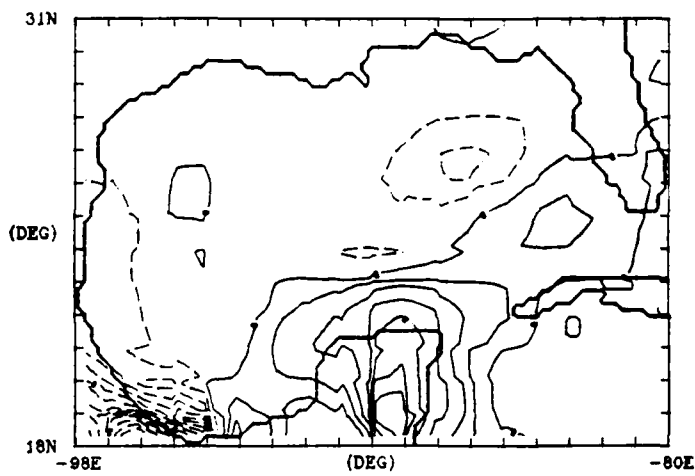
MIN = -6.89E-07 MAX = 1.23E-06
MORDA 927 13-DEC-84

WIND STRESS
OCTOBER/1978



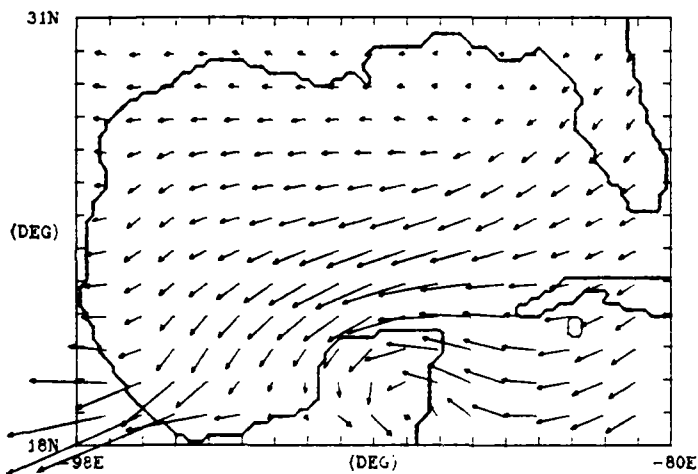
MAXIMUM WIND STRESS = 1.99 DYNES/CM²
NORDA 927 13-DEC-84

WIND STRESS CURL
OCTOBER/1978 DC = 2.0E-07 MKS



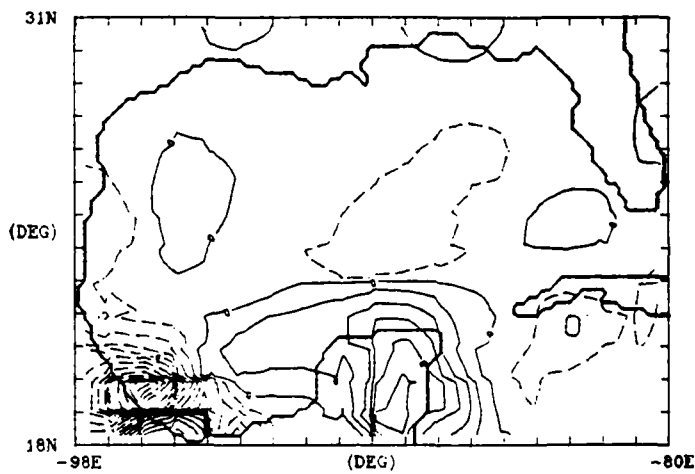
MIN = -2.78E-06 MAX = 1.56E-06
NORDA 927 13-DEC-84

WIND STRESS
NOVEMBER/1978



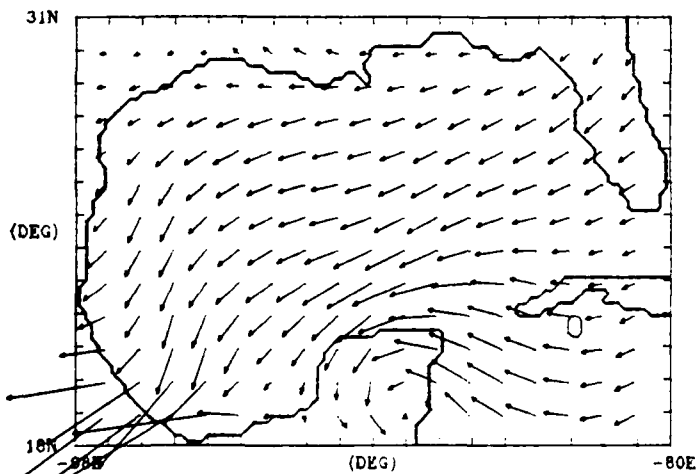
MAXIMUM WIND STRESS = 3.88 DYNES/CM²
NORDA 927 13-DEC-84

WIND STRESS CURL
NOVEMBER/1978 DC = 2.0E-07 MKS



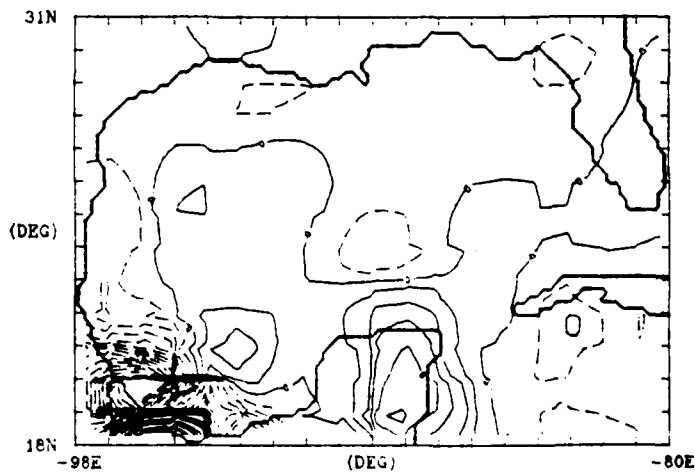
MIN = -3.14E-06 MAX = 1.64E-06
NORDA 927 13-DEC-84

WIND STRESS
DECEMBER/1978



MAXIMUM WIND STRESS = 6.47 DYNES/CM²
NORDA 927 13-DEC-84

WIND STRESS CURL
DECEMBER/1978 DC = 2.0E-07 MKS

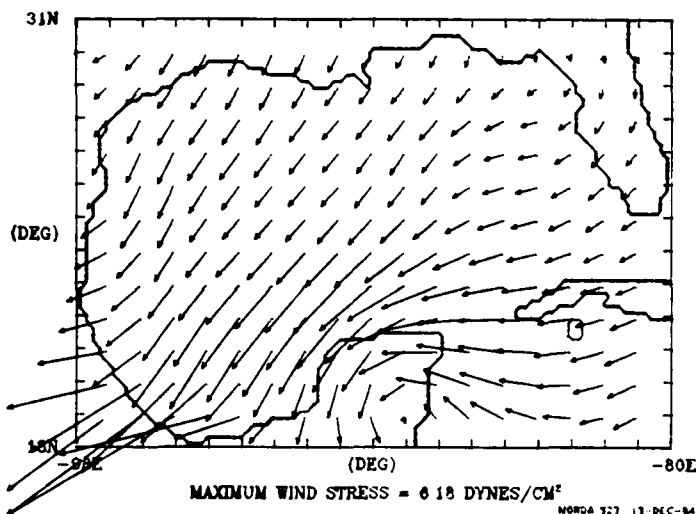


MIN = -5.20E-06 MAX = 3.75E-06
NORDA 927 13-DEC-84

WIND STRESS

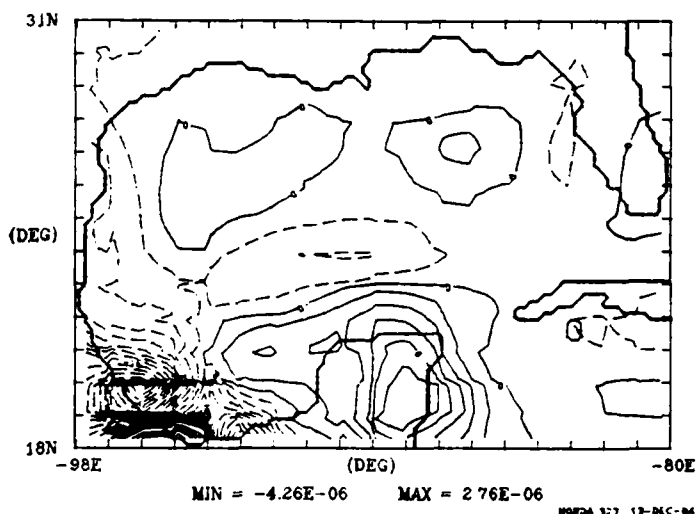
JANUARY/1979

1.0



WIND STRESS CURL

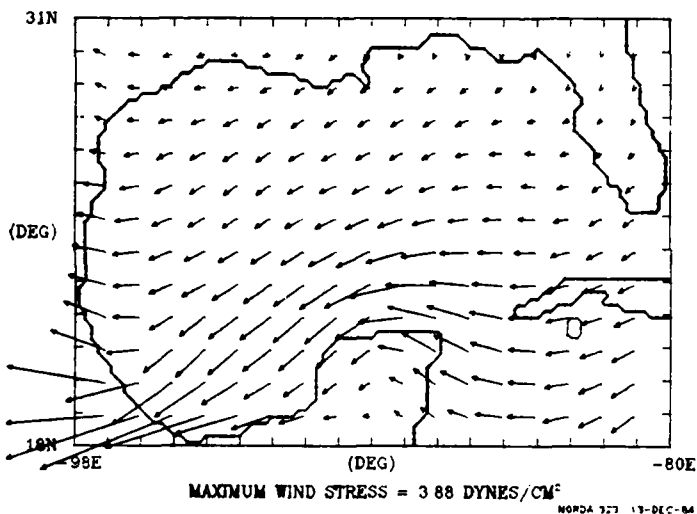
JANUARY/1979 DC = 2.0E-07 MKS



WIND STRESS

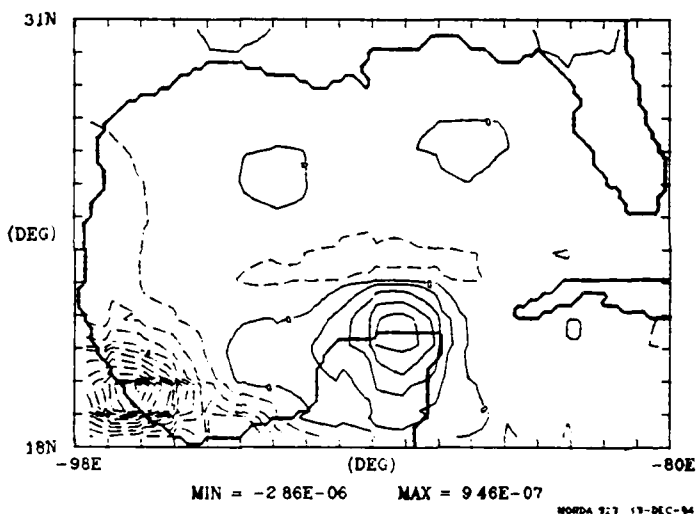
FEBRUARY/1979

1.0



WIND STRESS CURL

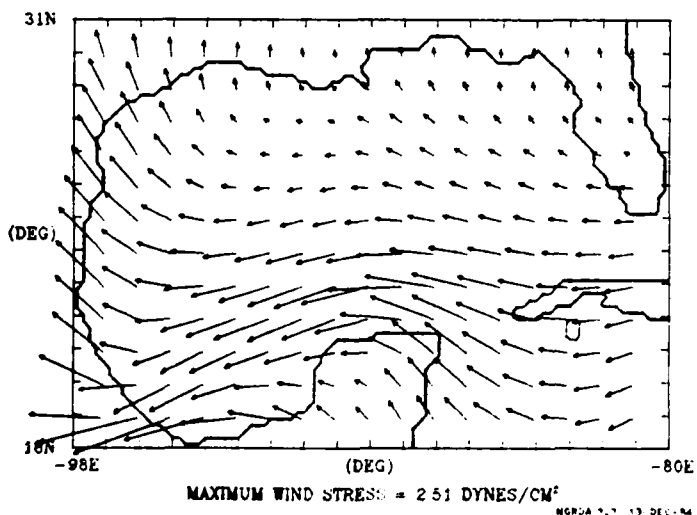
FEBRUARY/1979 DC = 2.0E-07 MKS



WIND STRESS

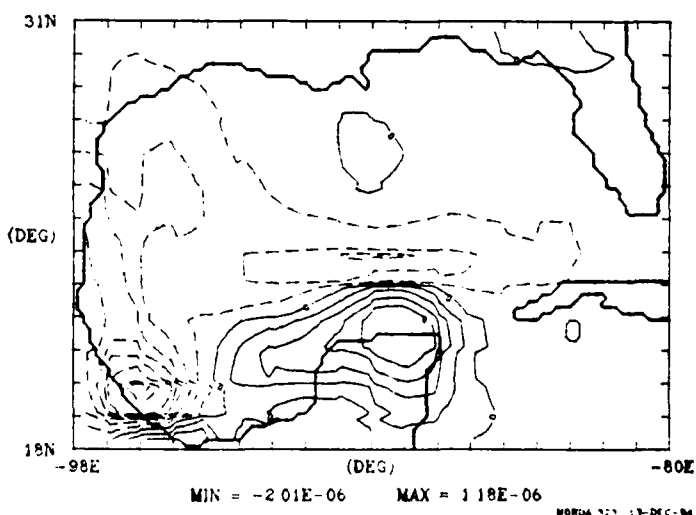
MARCH/1979

1.0

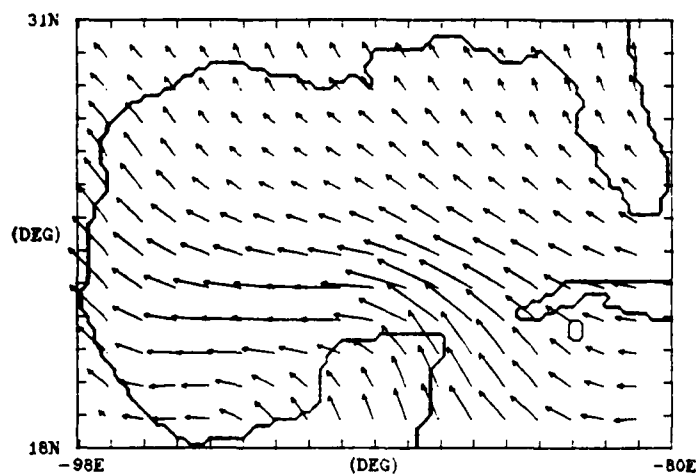


WIND STRESS CURL

MARCH/1979 DC = 2.0E-07 MKS



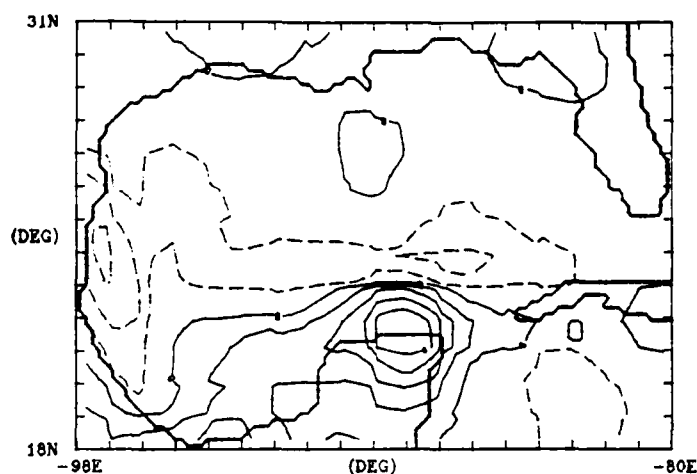
WIND STRESS
APRIL/1979



MAXIMUM WIND STRESS = 1.62 DYNES/CM²

WOPDA 577 13-DEC-84

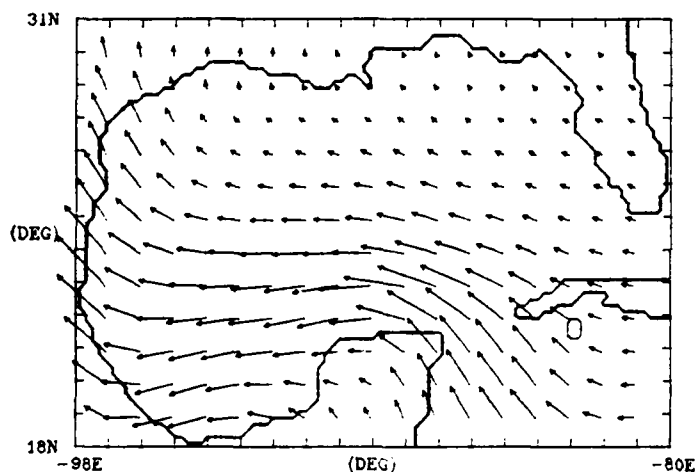
WIND STRESS CURL
APRIL/1979 DC = 2.0E-07 MKS



MIN = -6.68E-07 MAX = 9.84E-07

WOPDA 577 13-DEC-84

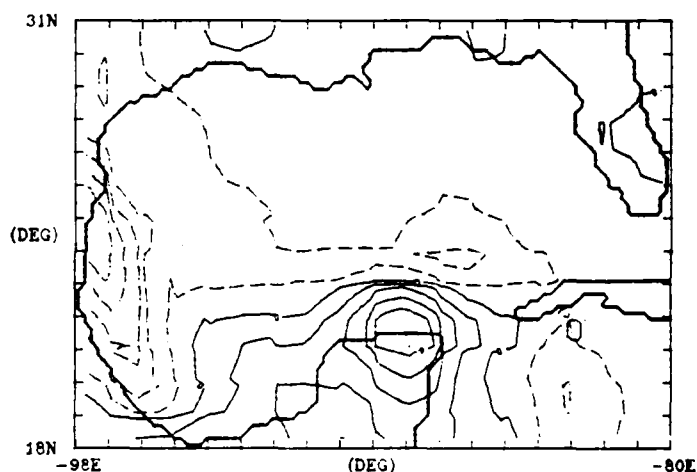
WIND STRESS
MAY/1979



MAXIMUM WIND STRESS = 1.71 DYNES/CM²

WOPDA 577 13-DEC-84

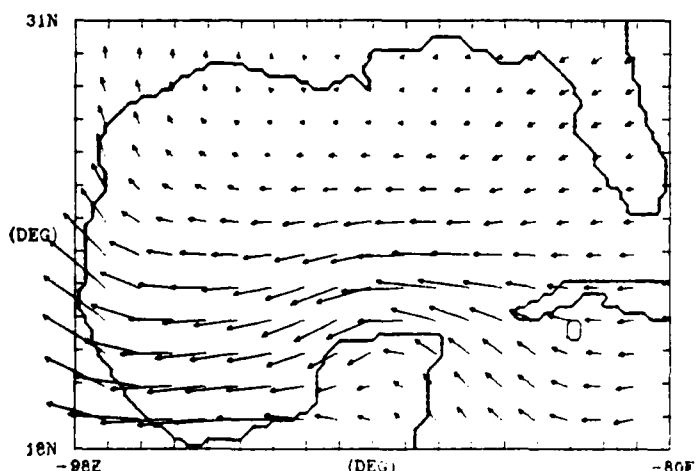
WIND STRESS CURL
MAY/1979 DC = 2.0E-07 MKS



MIN = -1.18E-06 MAX = 1.00E-06

WOPDA 577 13-DEC-84

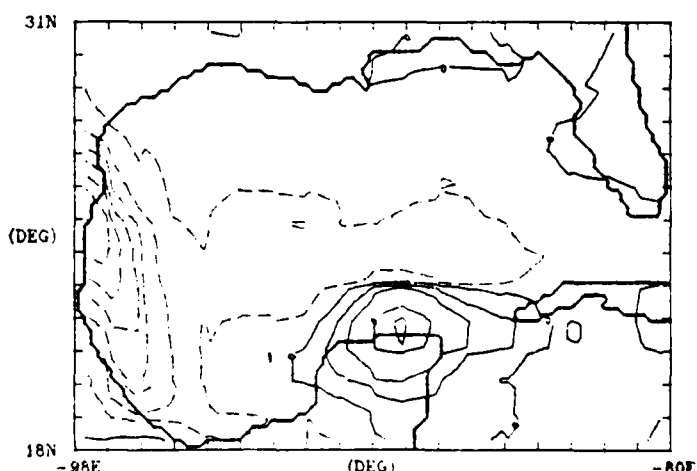
WIND STRESS
JUNE/1979



MAXIMUM WIND STRESS = 1.87 DYNES/CM²

WOPDA 577 13-DEC-84

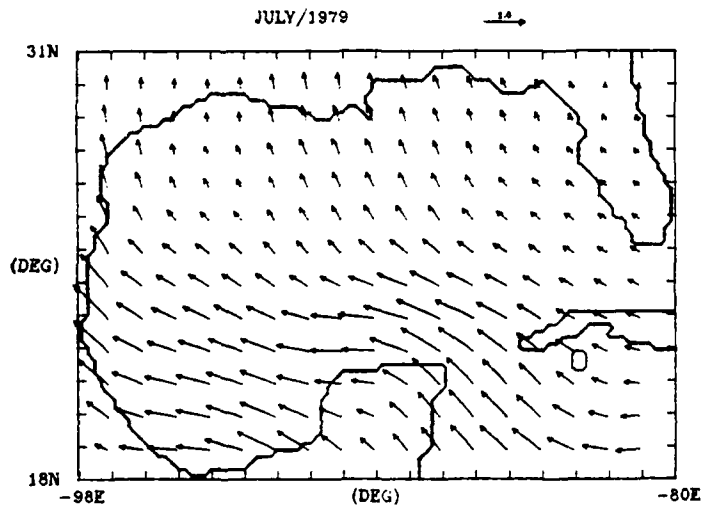
WIND STRESS CURL
JUNE/1979 DC = 2.0E-07 MKS



MIN = -1.42E-06 MAX = 1.05E-06

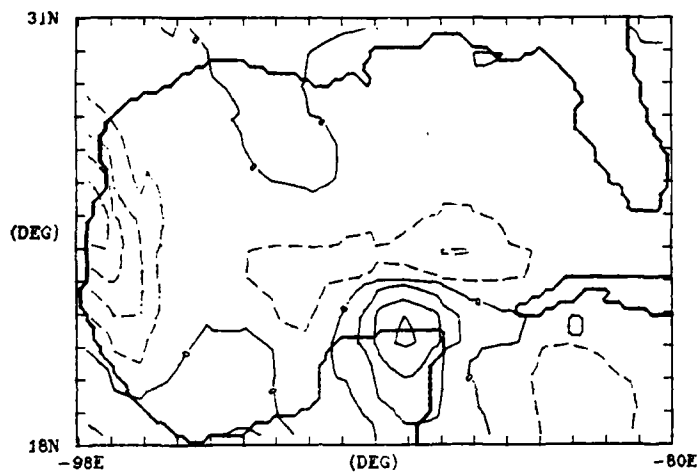
WOPDA 577 13-DEC-84

WIND STRESS
JULY/1979



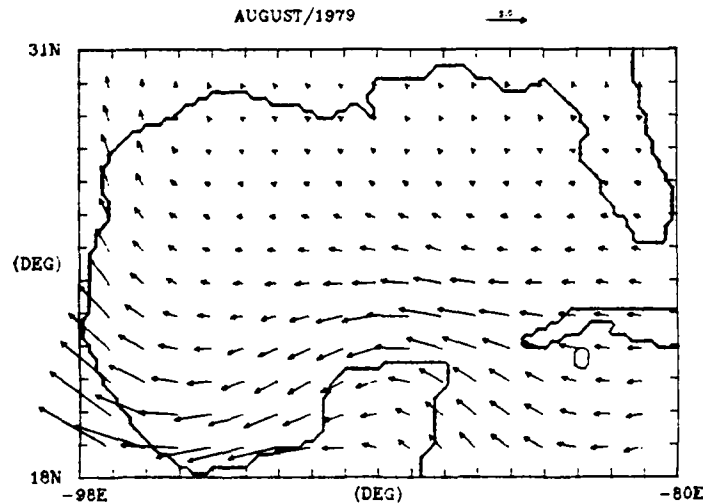
NOIDA 927 13-DEC-84

WIND STRESS CURL
JULY/1979 DC = 2.0E-07 MKS



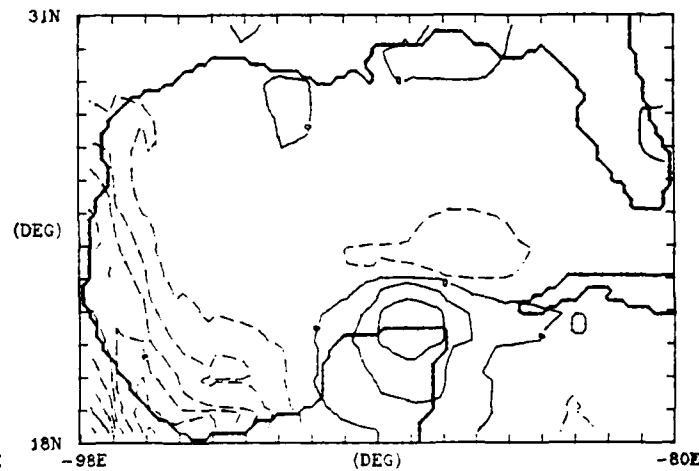
NOIDA 927 13-DEC-84

WIND STRESS
AUGUST/1979



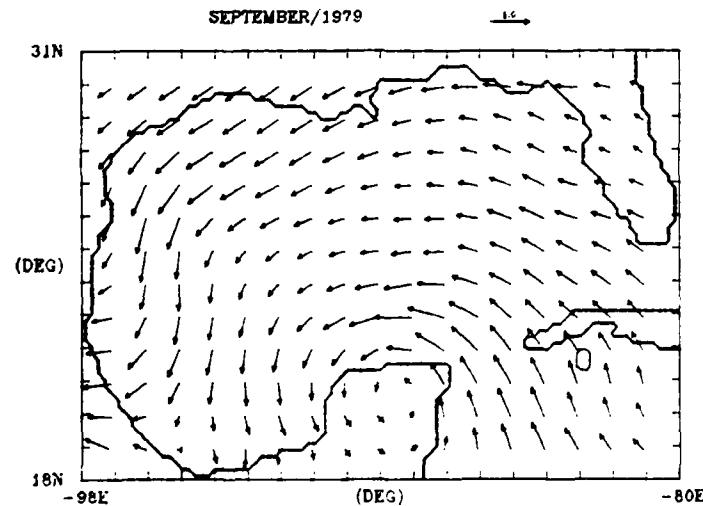
NOIDA 927 13-DEC-84

WIND STRESS CURL
AUGUST/1979 DC = 2.0E-07 MKS



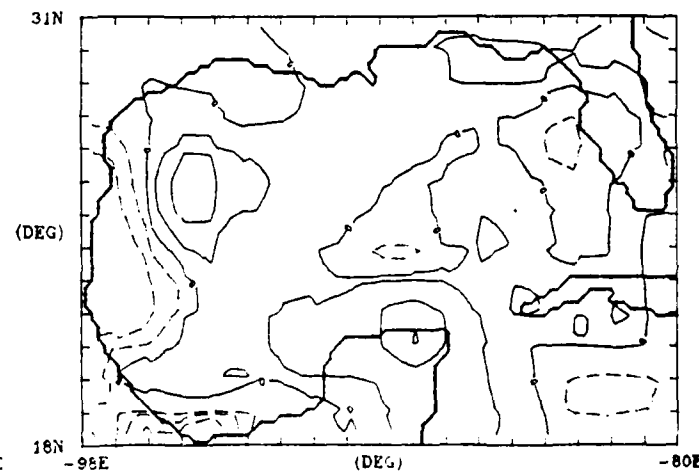
NOIDA 927 13-DEC-84

WIND STRESS
SEPTEMBER/1979



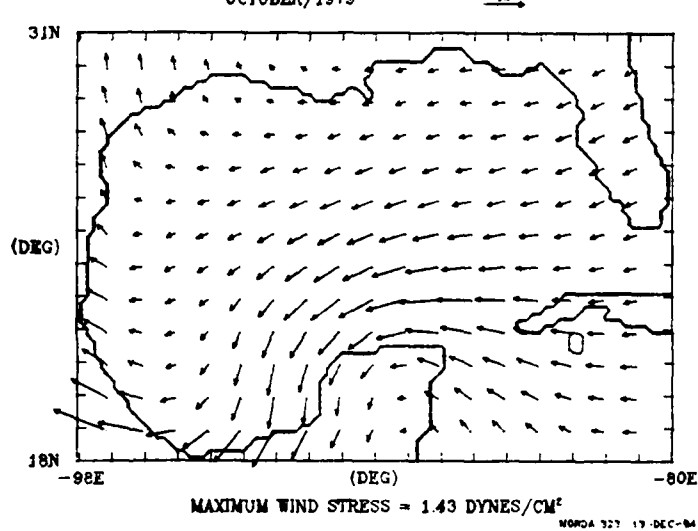
NOIDA 927 13-DEC-84

WIND STRESS CURL
SEPTEMBER/1979 DC = 2.0E-07 MKS

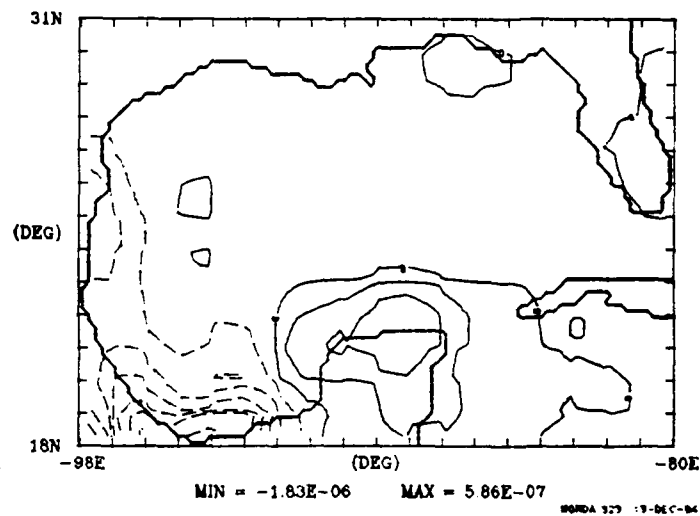


NOIDA 927 13-DEC-84

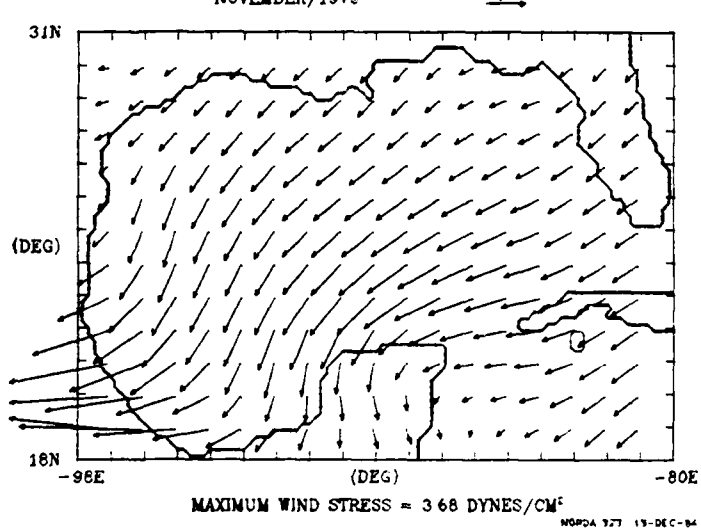
WIND STRESS
OCTOBER/1979



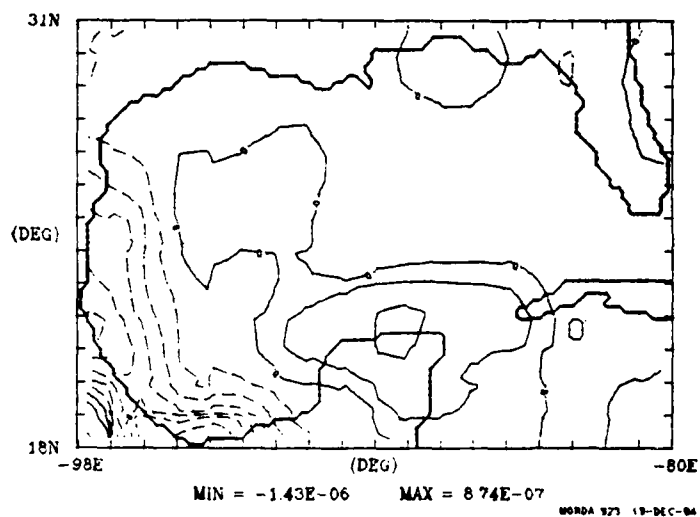
WIND STRESS CURL
OCTOBER/1979 DC = 2.0E-07 MKS



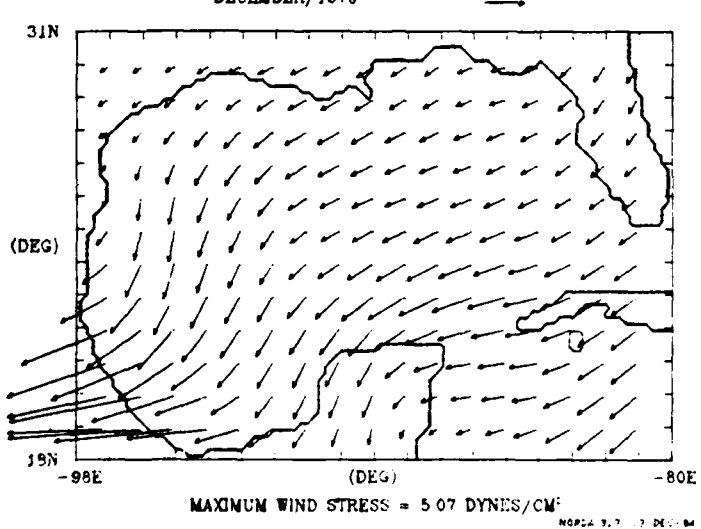
WIND STRESS
NOVEMBER/1979



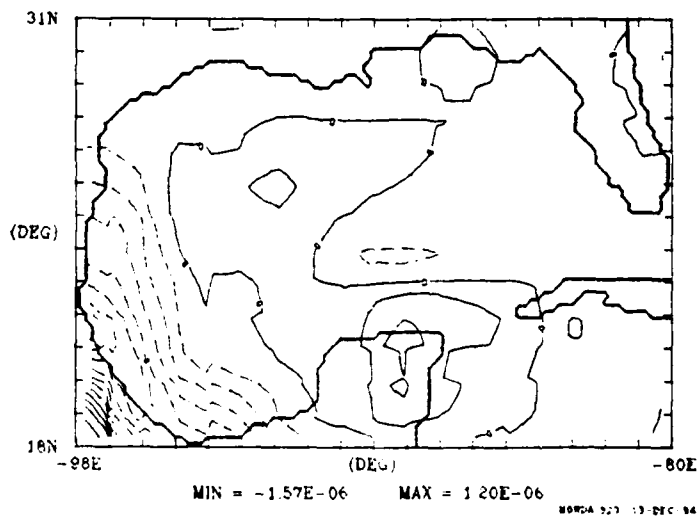
WIND STRESS CURL
NOVEMBER/1979 DC = 2.0E-07 MKS



WIND STRESS
DECEMBER/1979



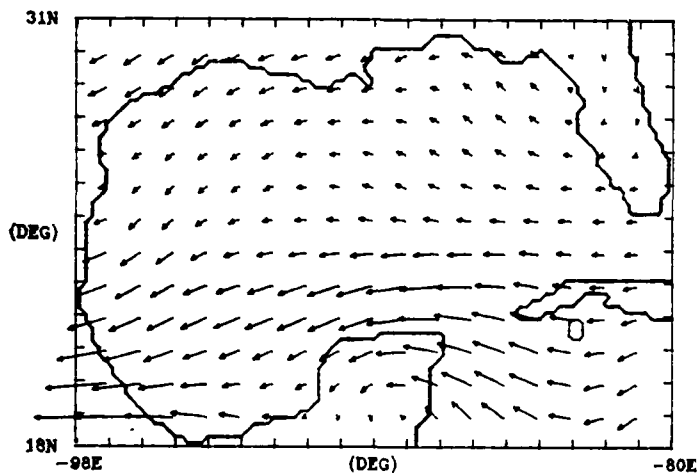
WIND STRESS CURL
DECEMBER/1979 DC = 2.0E-07 MKS



WIND STRESS

JANUARY/1980

10

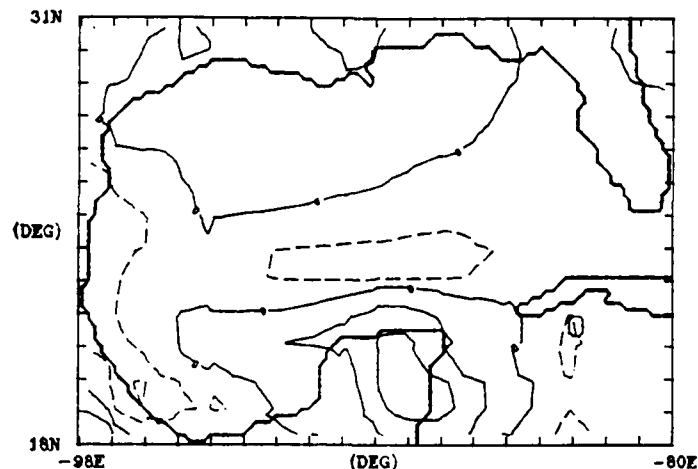


MAXIMUM WIND STRESS = 1.74 DYNES/CM²

NORDA 927 13-DEC-84

WIND STRESS CURL

JANUARY/1980 DC = 2.0E-07 MKS



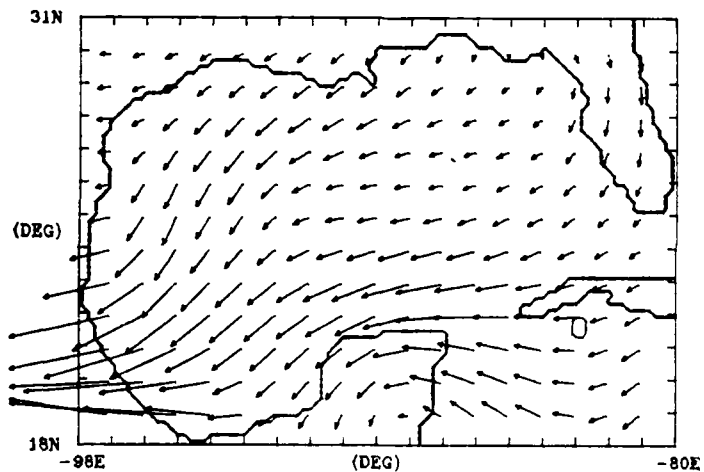
MIN = -4.30E-07 MAX = 5.60E-07

NORDA 927 13-DEC-84

WIND STRESS

FEBRUARY/1980

10

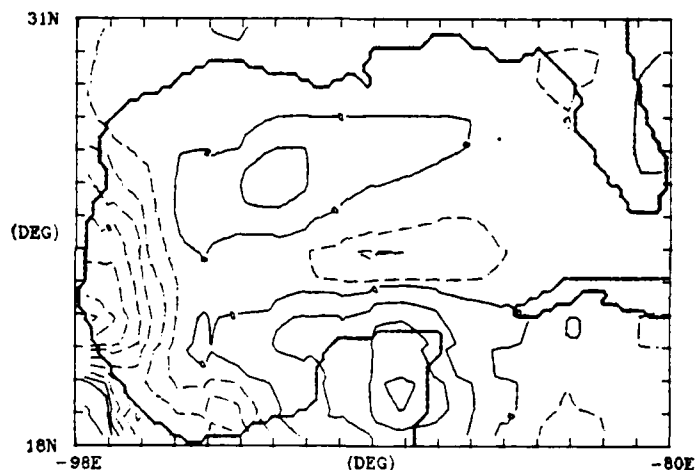


MAXIMUM WIND STRESS = 3.88 DYNES/CM²

NORDA 927 13-DEC-84

WIND STRESS CURL

FEBRUARY/1980 DC = 2.0E-07 MKS



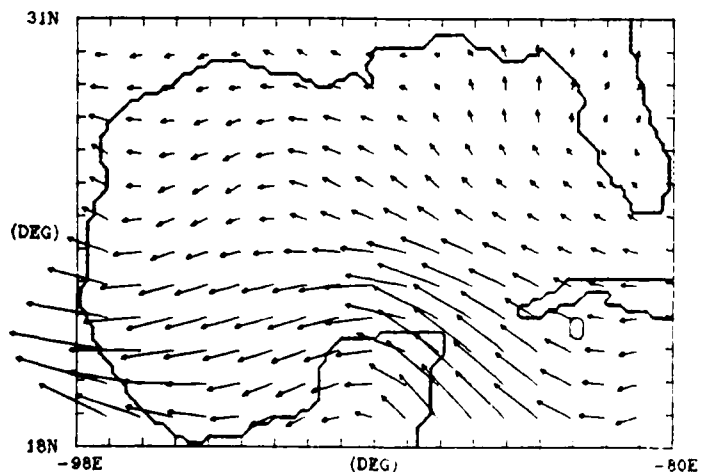
MIN = -1.50E-06 MAX = 1.22E-06

NORDA 927 13-DEC-84

WIND STRESS

MARCH/1980

10

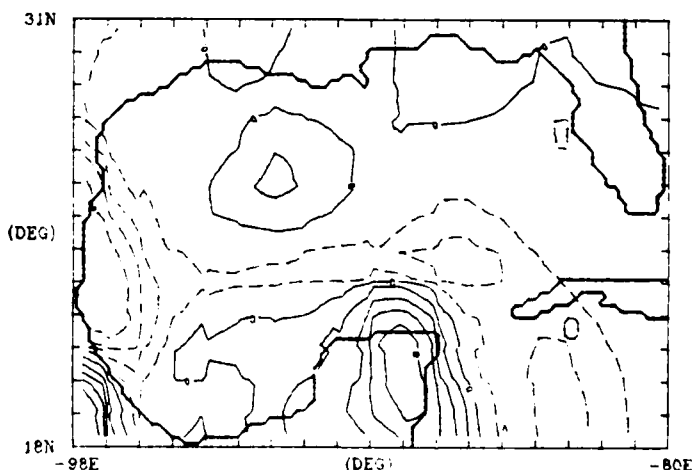


MAXIMUM WIND STRESS = 2.41 DYNES/CM²

NORDA 927 13-DEC-84

WIND STRESS CURL

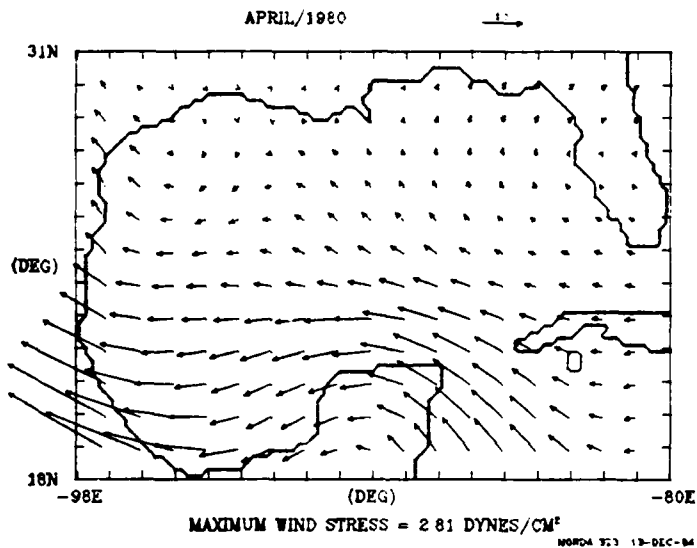
MARCH/1980 DC = 2.0E-07 MKS



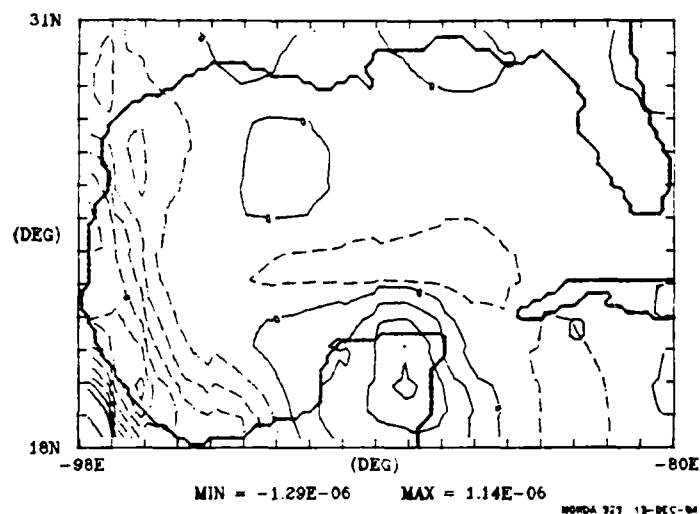
MIN = -9.98E-07 MAX = 1.07E-06

NORDA 927 13-DEC-84

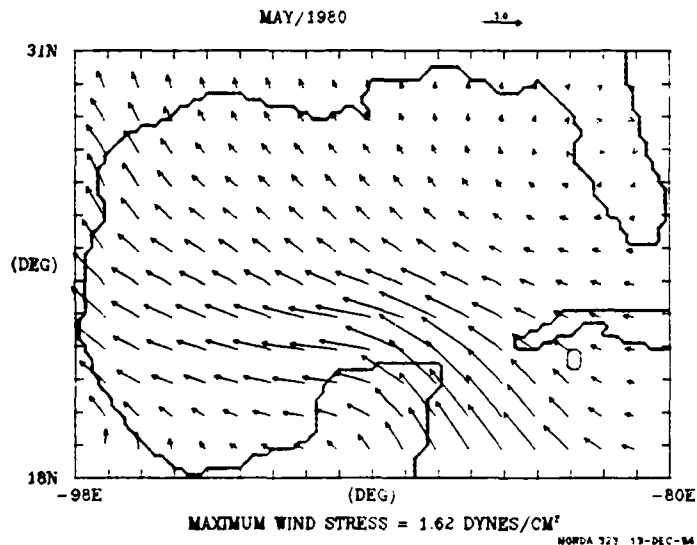
WIND STRESS
APRIL/1980



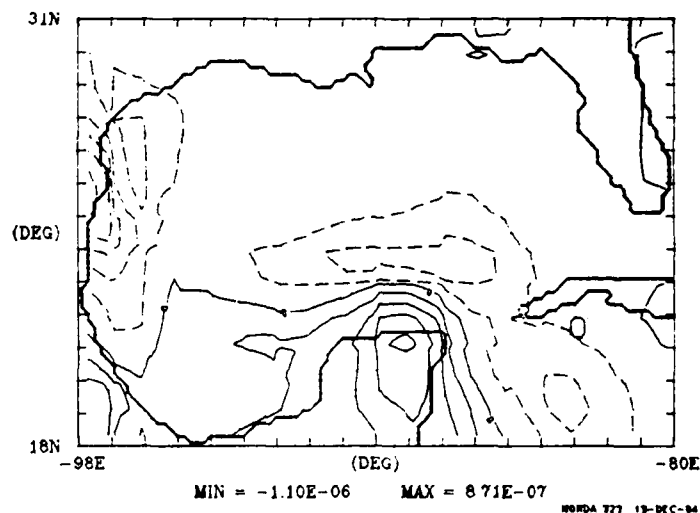
WIND STRESS CURL
APRIL/1980 DC = 2.0E-07 MKS



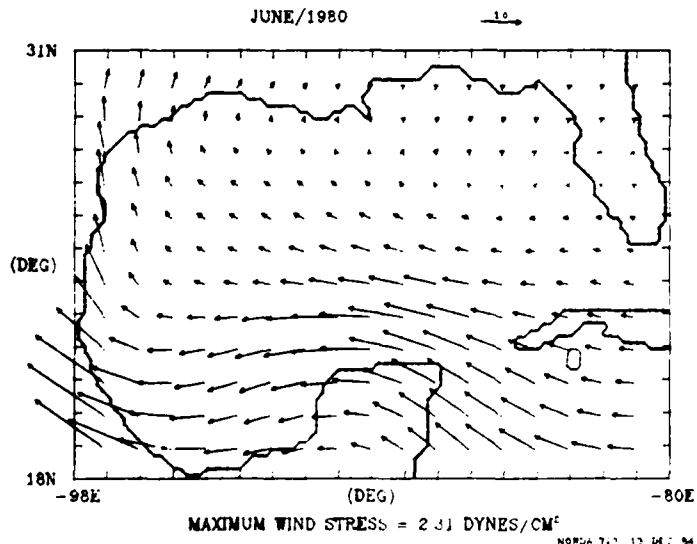
WIND STRESS
MAY/1980



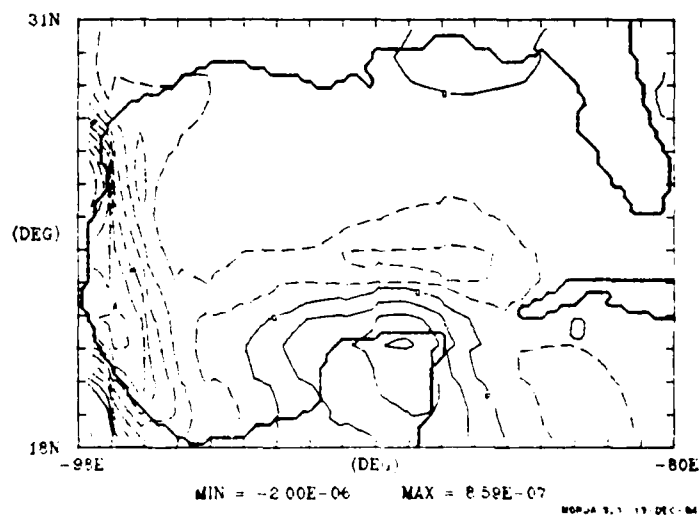
WIND STRESS CURL
MAY/1980 DC = 2.0E-07 MKS



WIND STRESS
JUNE/1980



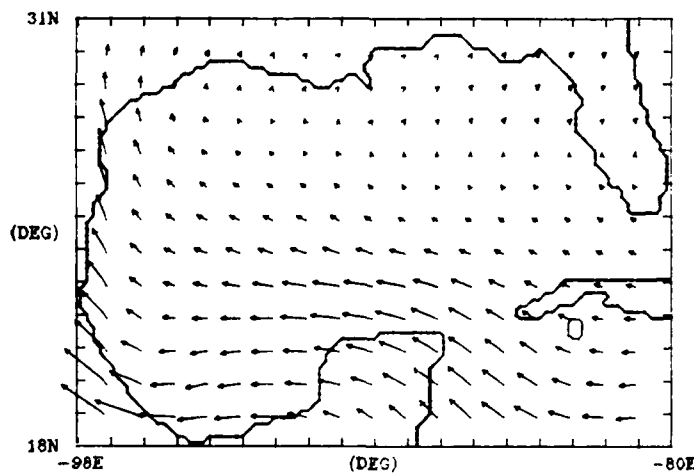
WIND STRESS CURL
JUNE/1980 DC = 2.0E-07 MKS



WIND STRESS

JULY/1980

10

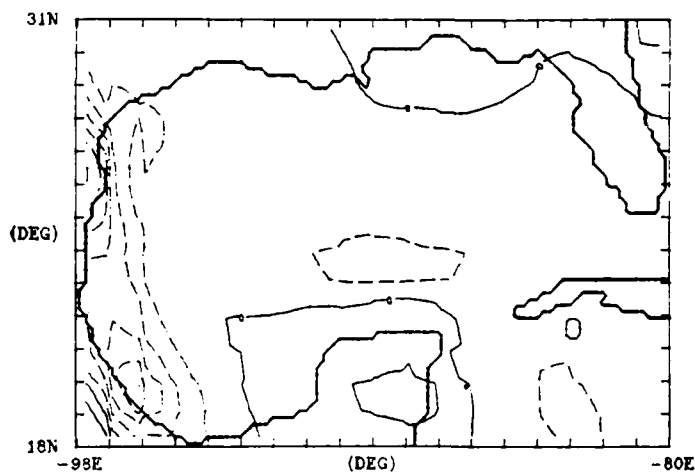


MAXIMUM WIND STRESS = 1.37 DYNES/CM²

NOFPA 777 13-DEC-84

WIND STRESS CURL

JULY/1980 DC = 2.0E-07 MKS



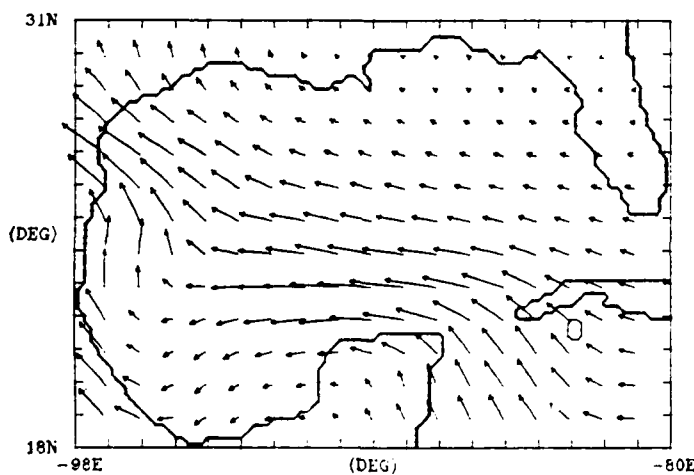
MIN = -1.23E-06 MAX = 4.62E-07

NOFPA 777 13-DEC-84

WIND STRESS

AUGUST/1980

10

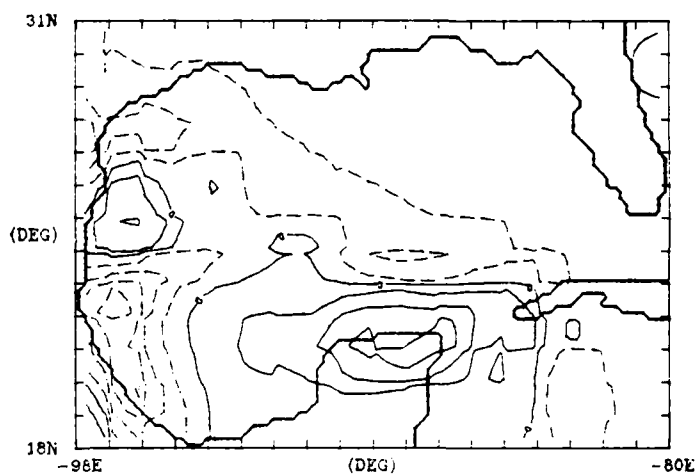


MAXIMUM WIND STRESS = 1.32 DYNES/CM²

NOFPA 777 13-DEC-84

WIND STRESS CURL

AUGUST/1980 DC = 2.0E-07 MKS



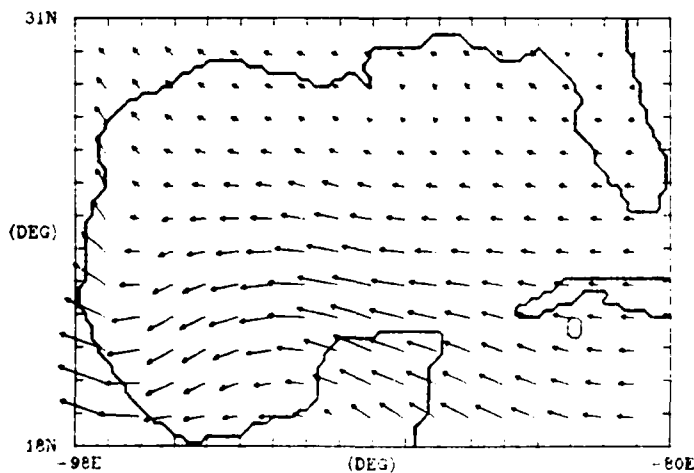
MIN = -9.77E-07 MAX = 8.61E-07

NOFPA 777 13-DEC-84

WIND STRESS

SEPTEMBER/1980

10

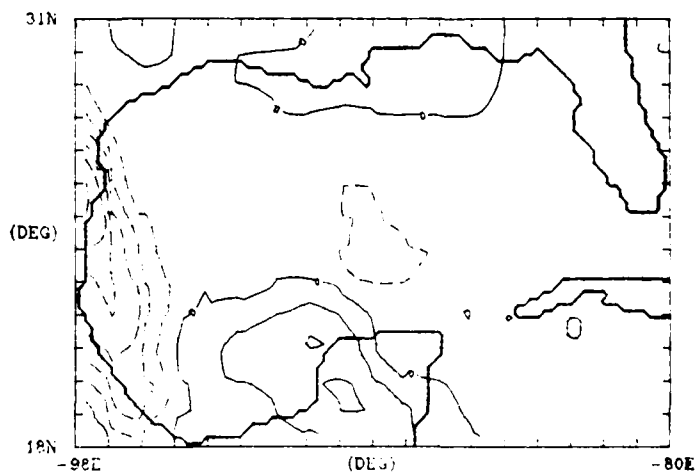


MAXIMUM WIND STRESS = 1.25 DYNES/CM²

NOFPA 777 13-DEC-84

WIND STRESS CURL

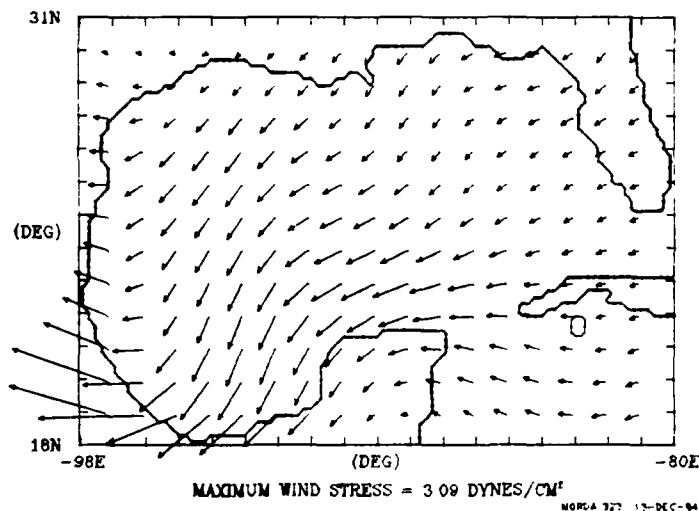
SEPTEMBER/1980 DC = 2.0E-07 MKS



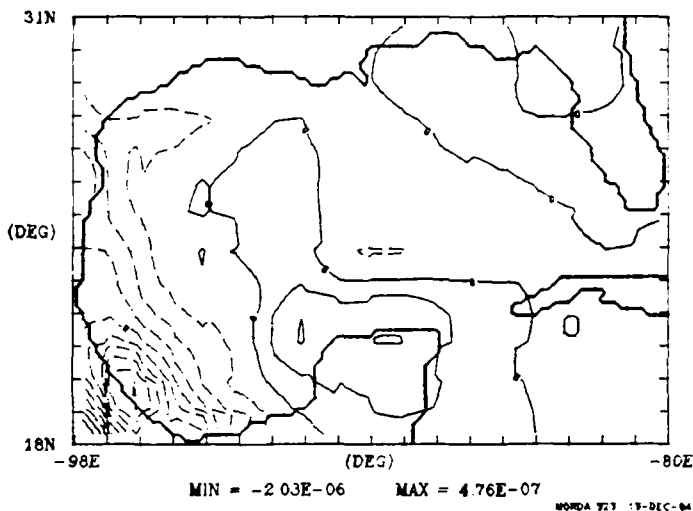
MIN = -1.24E-06 MAX = 4.30E-07

NOFPA 777 13-DEC-84

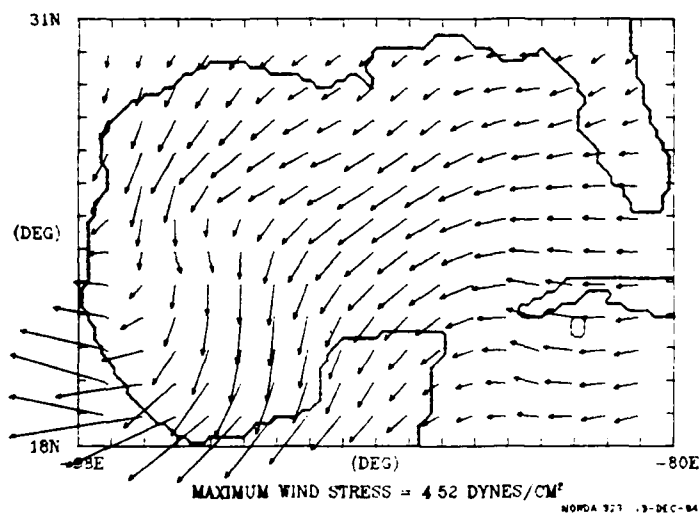
WIND STRESS
OCTOBER/1980



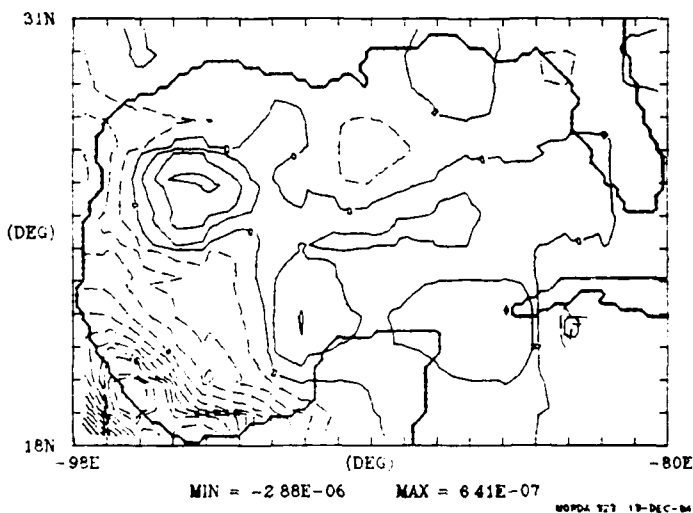
WIND STRESS CURL
OCTOBER/1980 DC = 2.0E-07 MKS



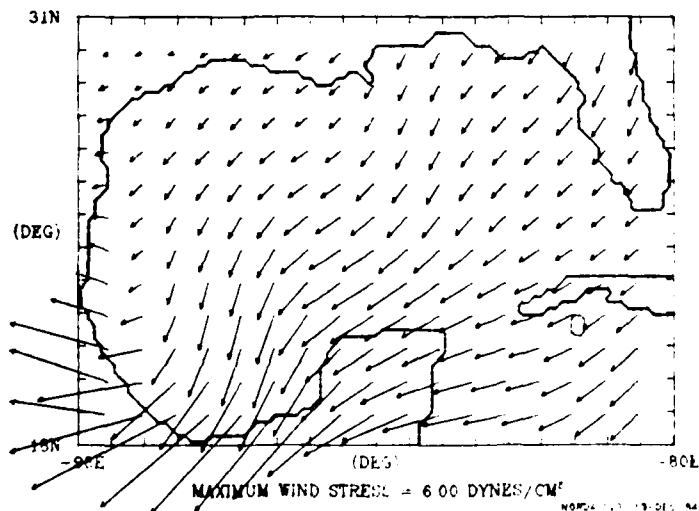
WIND STRESS
NOVEMBER/1980



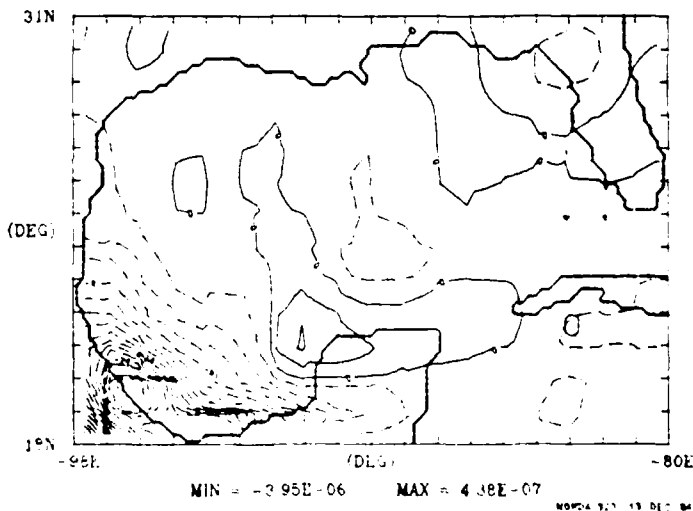
WIND STRESS CURL
NOVEMBER/1980 DC = 2.0E-07 MKS



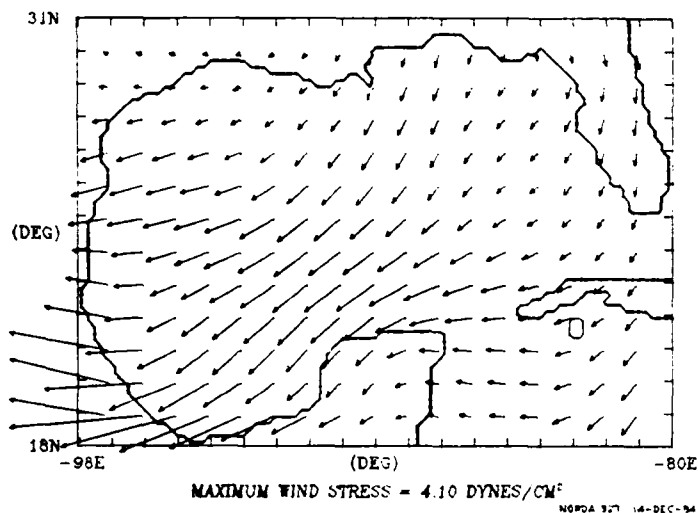
WIND STRESS
DECEMBER/1980



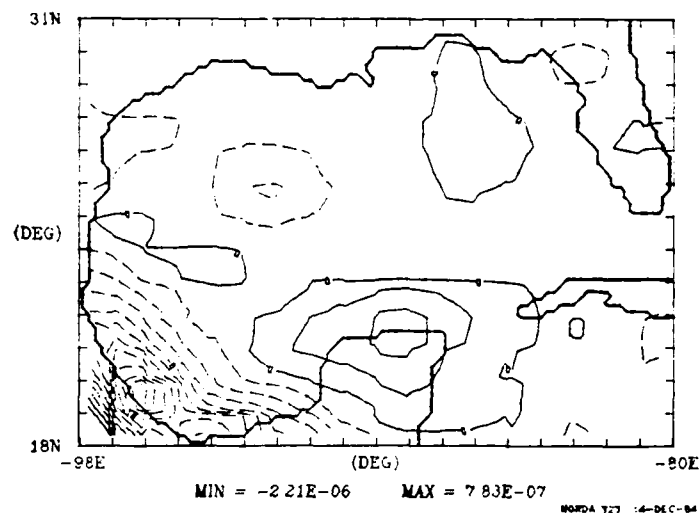
WIND STRESS CURL
DECEMBER/1980 DC = 2.0E-07 MKS



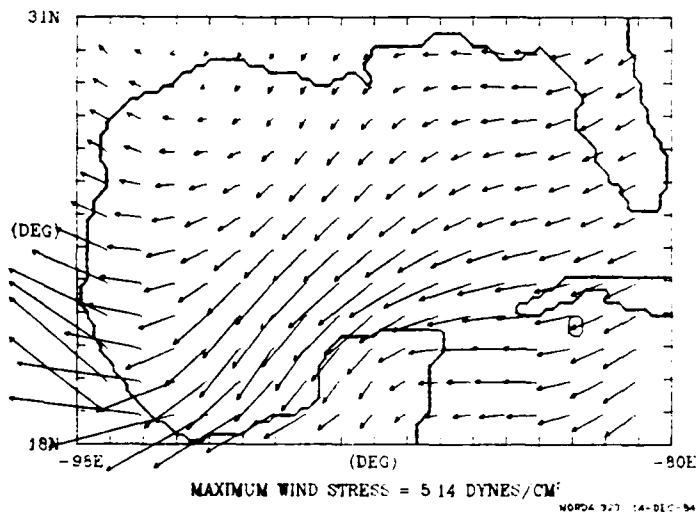
WIND STRESS
JANUARY/1981



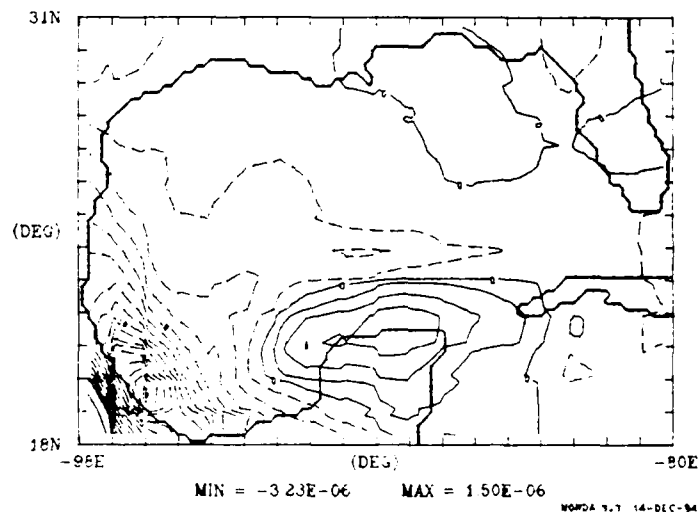
WIND STRESS CURL
JANUARY/1981 DC = 2.0E-07 MKS



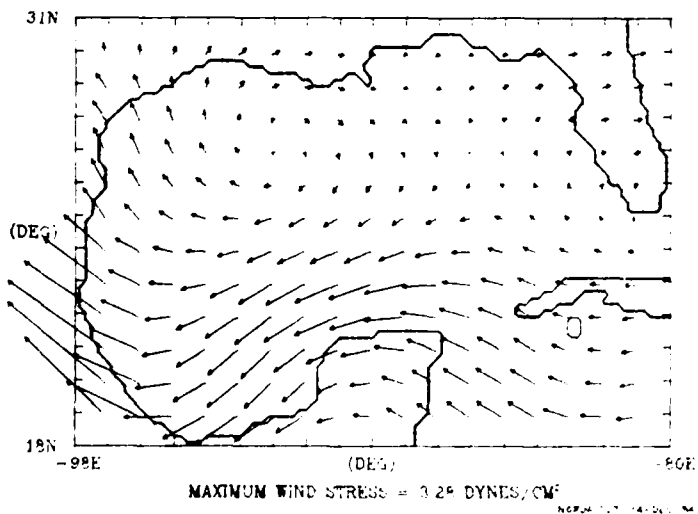
WIND STRESS
FEBRUARY/1981



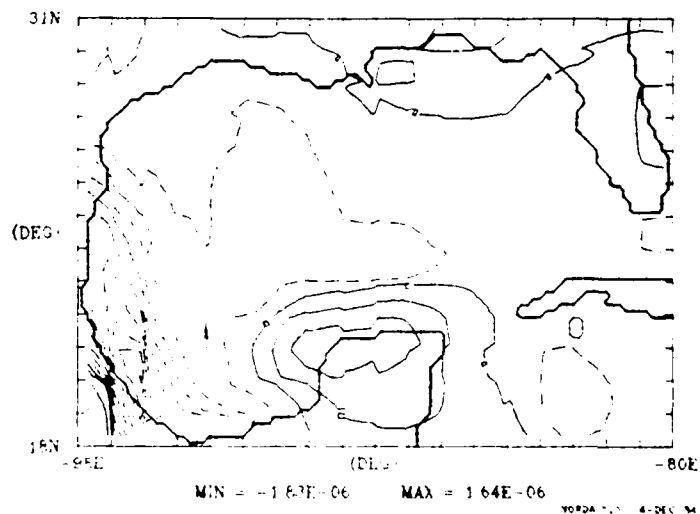
WIND STRESS CURL
FEBRUARY/1981 DC = 2.0E-07 MKS



WIND STRESS
MARCH/1981



WIND STRESS CURL
MARCH/1981 DC = 2.0E-07 MKS



AD-A169 026

NAVY CORRECTED GEOSTROPHIC WIND SET FOR THE GULF OF
MEXICO(U) JAYCOR ALEXANDRIA VA R C RHODES ET AL.
MAR 85 NORDA-TN-310 N00014-85-R-0578

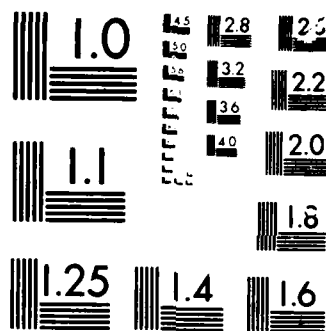
2/2

UNCLASSIFIED

F/G 4/2

NL

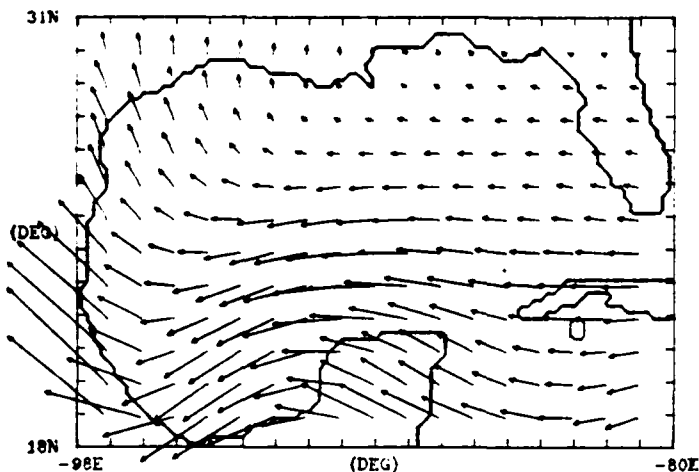




WIND STRESS

APRIL/1981

1.0

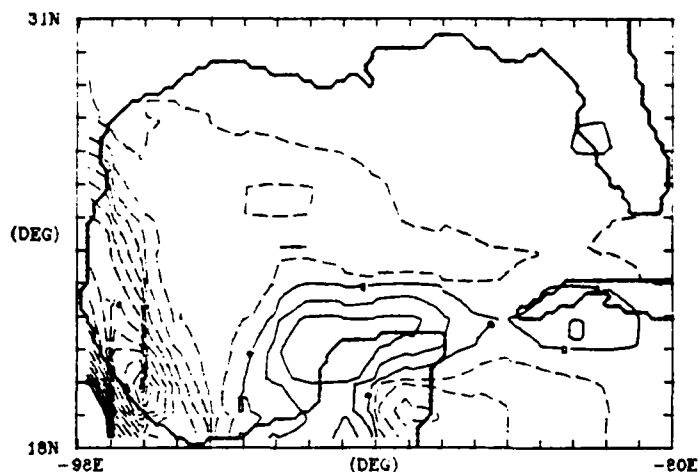


MAXIMUM WIND STRESS = 3.68 DYNES/CM²

NOPOA 7.7 14-DEC-84

WIND STRESS CURL

APRIL/1981 DC = 2.0E-07 MKS



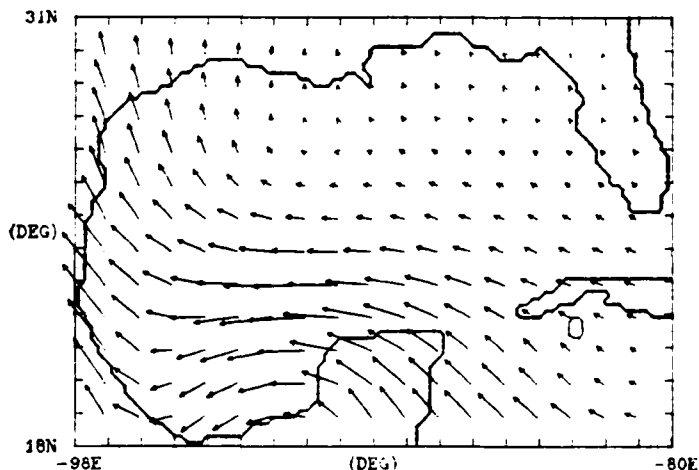
MIN = -2.63E-06 MAX = 1.35E-06

NOPOA 7.7 14-DEC-84

WIND STRESS

MAY/1981

1.0

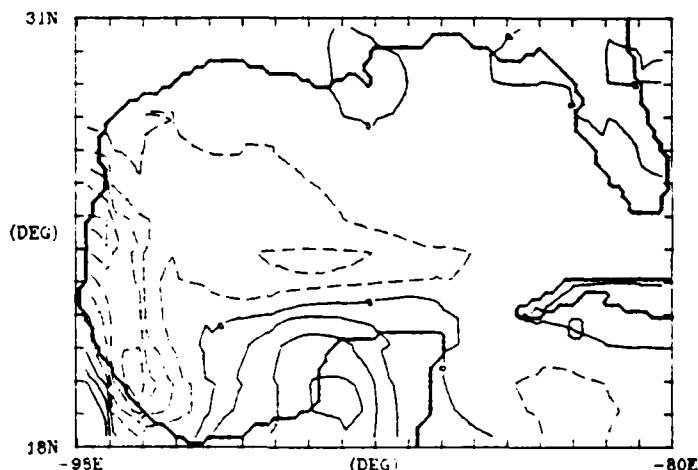


MAXIMUM WIND STRESS = 1.65 DYNES/CM²

NOPOA 7.7 14-DEC-84

WIND STRESS CURL

MAY/1981 DC = 2.0E-07 MKS



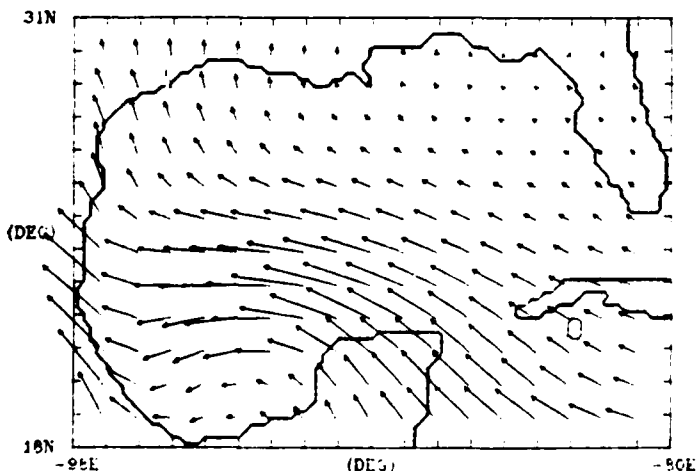
MIN = -1.03E-06 MAX = 7.07E-07

NOPOA 7.7 14-DEC-84

WIND STRESS

JUNE/1981

1.0

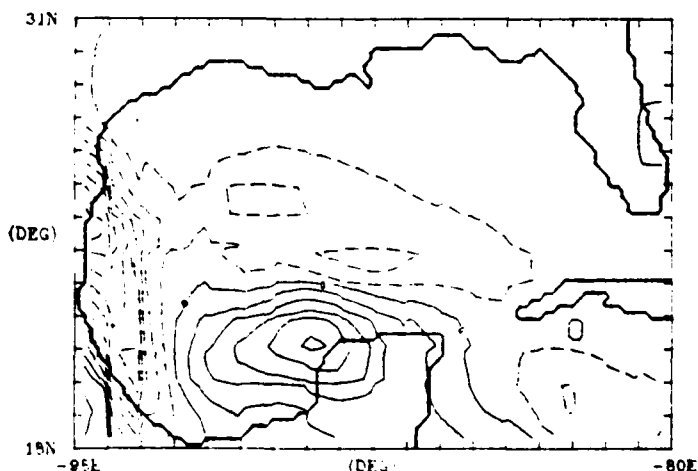


MAXIMUM WIND STRESS = 1.97 DYNES/CM²

NOPOA 7.7 14-DEC-84

WIND STRESS CURL

JUNE/1981 DC = 2.0E-07 MKS



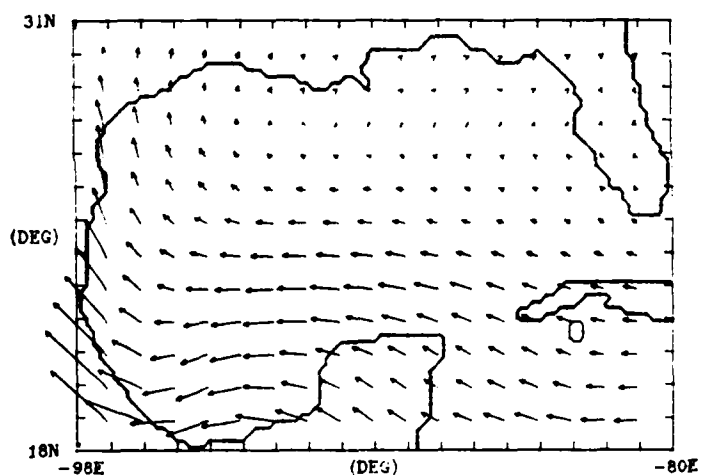
MIN = -1.71E-06 MAX = 1.06E-06

NOPOA 7.7 14-DEC-84

WIND STRESS

JULY/1981

10

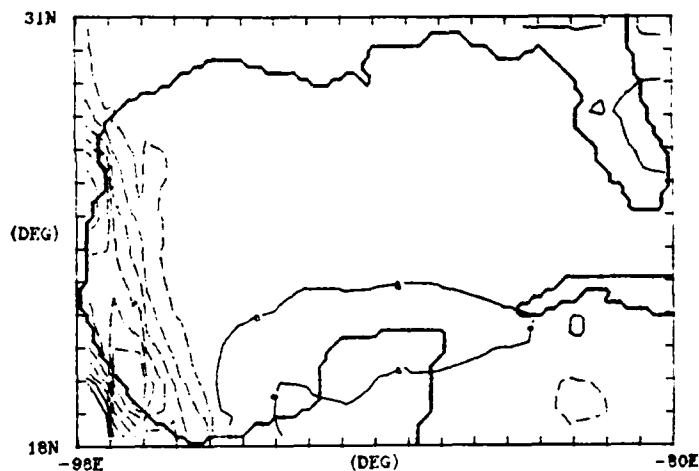


MAXIMUM WIND STRESS = 2.05 DYNES/CM²

NOPOA 977 14-DEC-84

WIND STRESS CURL

JULY/1981 DC = 2.0E-07 MKS



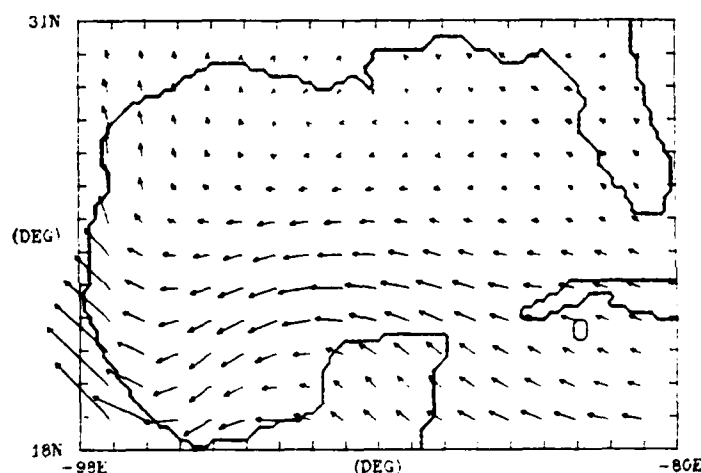
MIN = -1.49E-06 MAX = 7.28E-07

NOPOA 977 14-DEC-84

WIND STRESS

AUGUST/1981

10

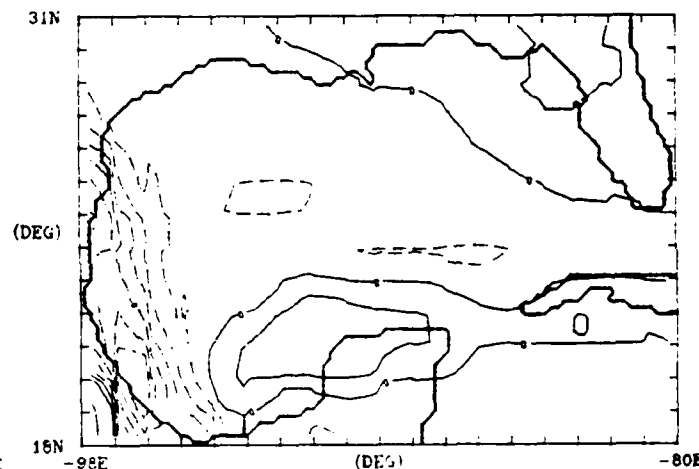


MAXIMUM WIND STRESS = 2.14 DYNES/CM²

NOPOA 977 14-DEC-84

WIND STRESS CURL

AUGUST/1981 DC = 2.0E-07 MKS



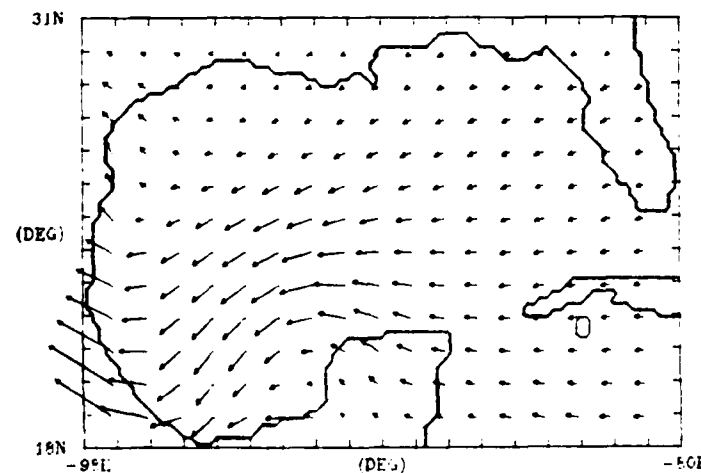
MIN = -1.51E-06 MAX = 9.37E-07

NOPOA 977 14-DEC-84

WIND STRESS

SEPTEMBER/1981

10

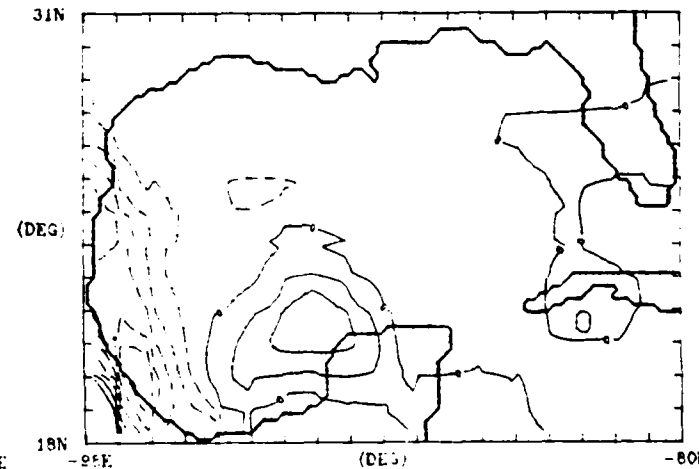


MAXIMUM WIND STRESS = 1.87 DYNES/CM²

NOPOA 977 14-DEC-84

WIND STRESS CURL

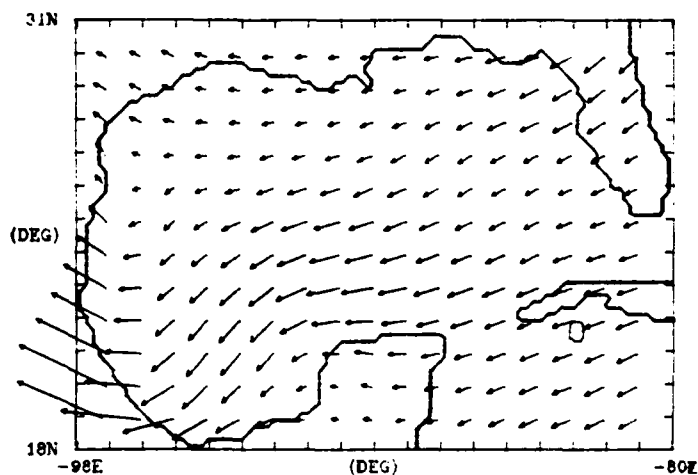
SEPTEMBER/1981 DC = 2.0E-07 MKS



MIN = -1.24E-06 MAX = 7.28E-07

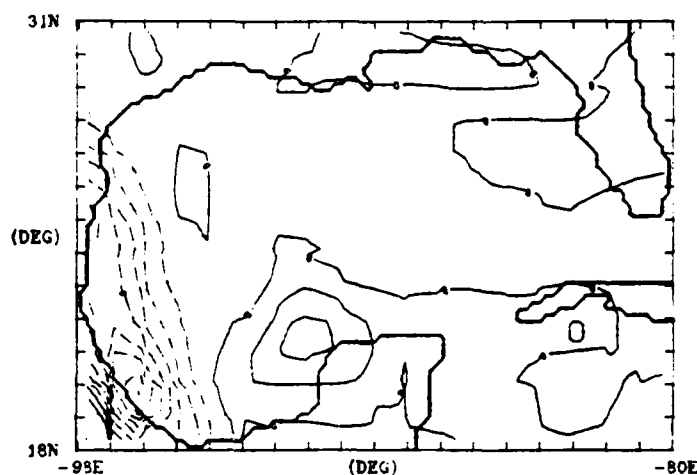
NOPOA 977 14-DEC-84

WIND STRESS
OCTOBER/1981



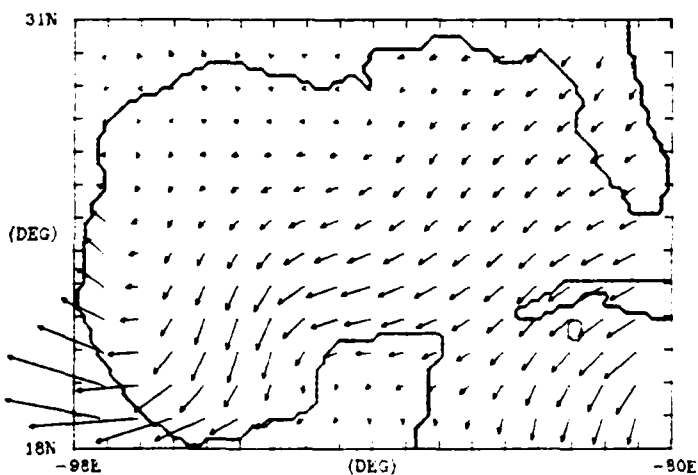
MAXIMUM WIND STRESS = 2.37 DYNES/CM²
NOPDA 3.7 14-DEC-84

WIND STRESS CURL
OCTOBER/1981 DC = 2.0E-07 MKS



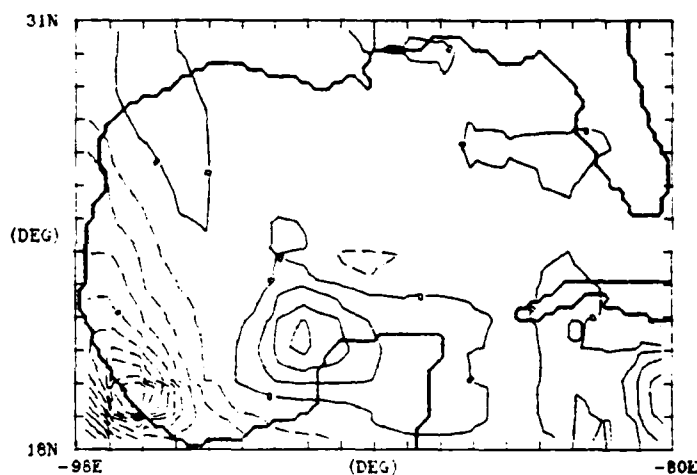
MIN = -1.64E-06 MAX = 8.09E-07
NOPDA 3.7 14-DEC-84

WIND STRESS
NOVEMBER/1981



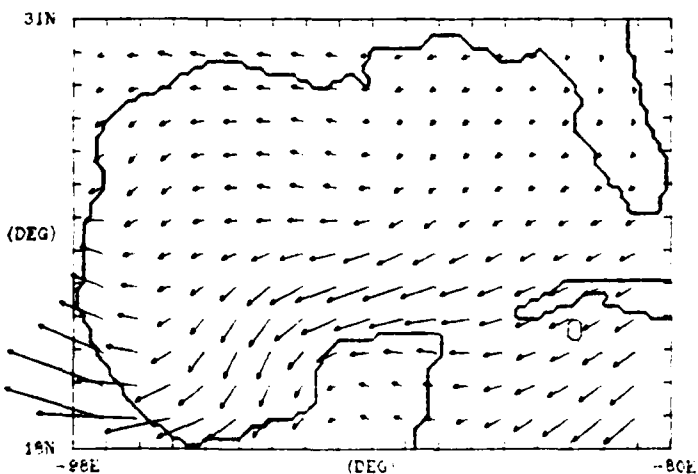
MAXIMUM WIND STRESS = 2.93 DYNES/CM²
NOPDA 3.7 14-DEC-84

WIND STRESS CURL
NOVEMBER/1981 DC = 2.0E-07 MKS



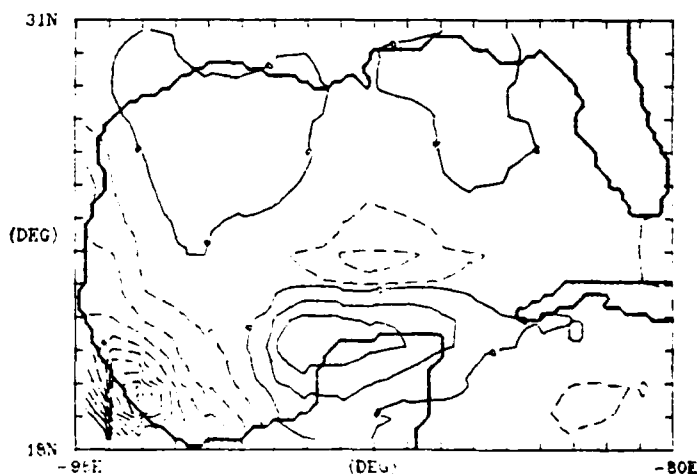
MIN = -2.11E-06 MAX = 7.00E-07
NOPDA 3.7 14-DEC-84

WIND STRESS
DECEMBER/1981



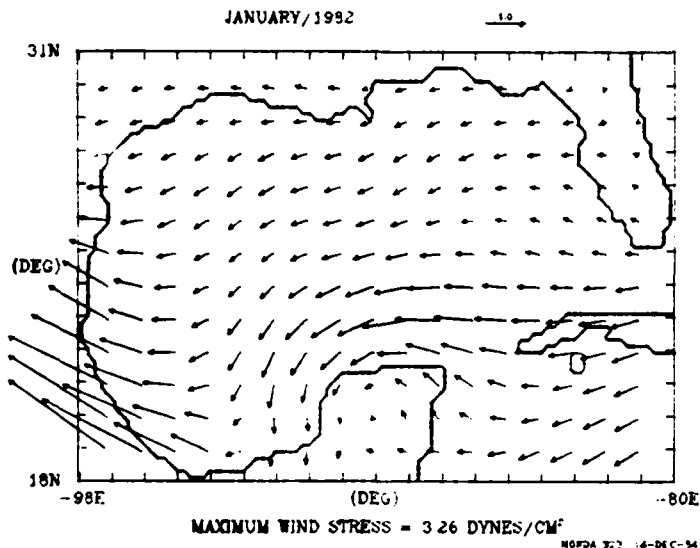
MAXIMUM WIND STRESS = 2.97 DYNES/CM²
NOPDA 3.7 14-DEC-84

WIND STRESS CURL
DECEMBER/1981 DC = 2.0E-07 MKS

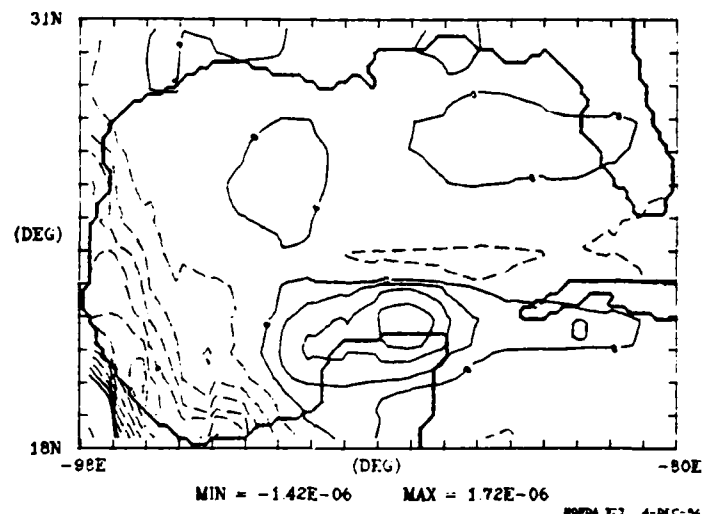


MIN = -1.84E-06 MAX = 8.22E-07
NOPDA 3.7 14-DEC-84

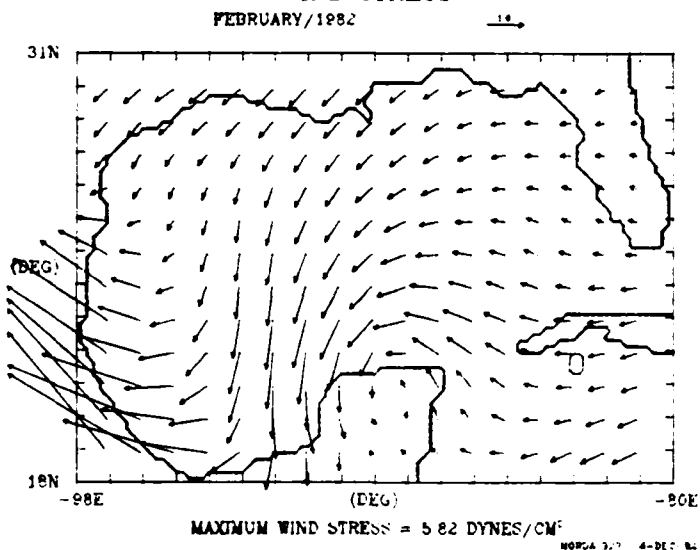
WIND STRESS
JANUARY/1982



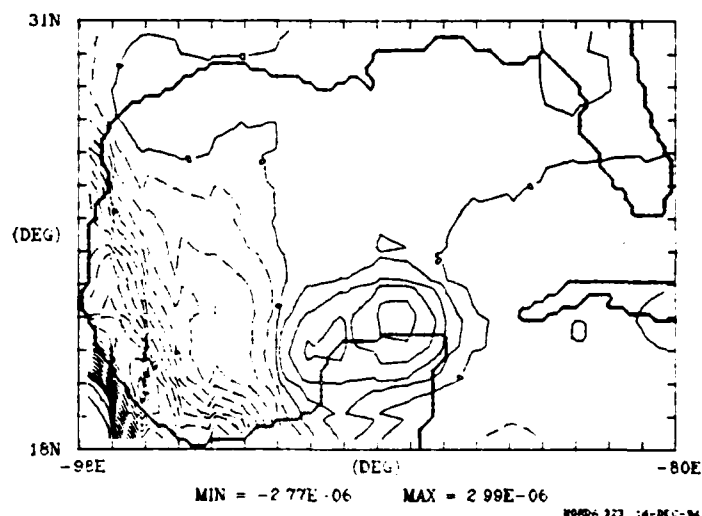
WIND STRESS CURL
JANUARY/1982 DC = 2.0E-07 MKS



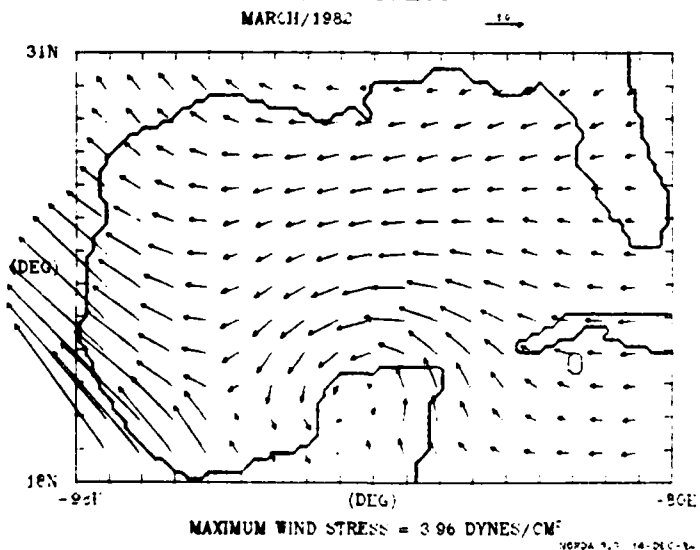
WIND STRESS
FEBRUARY/1982



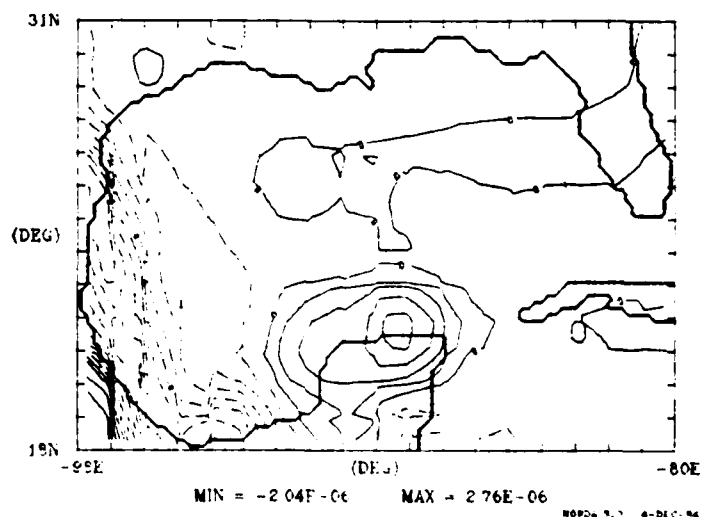
WIND STRESS CURL
FEBRUARY/1982 DC = 2.0E-07 MKS



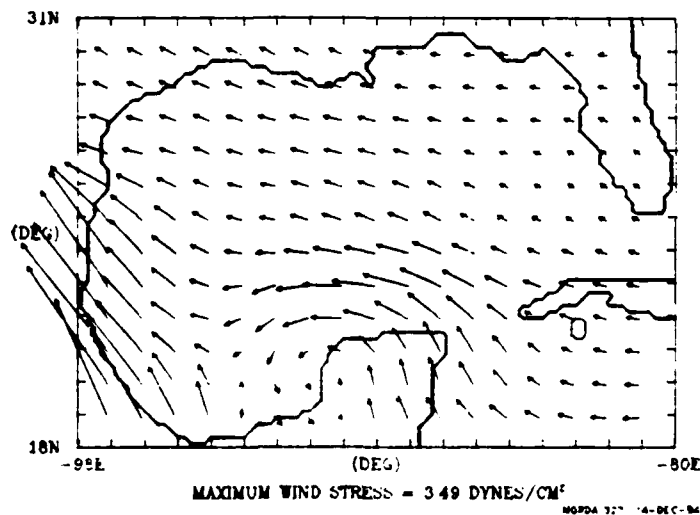
WIND STRESS
MARCH/1982



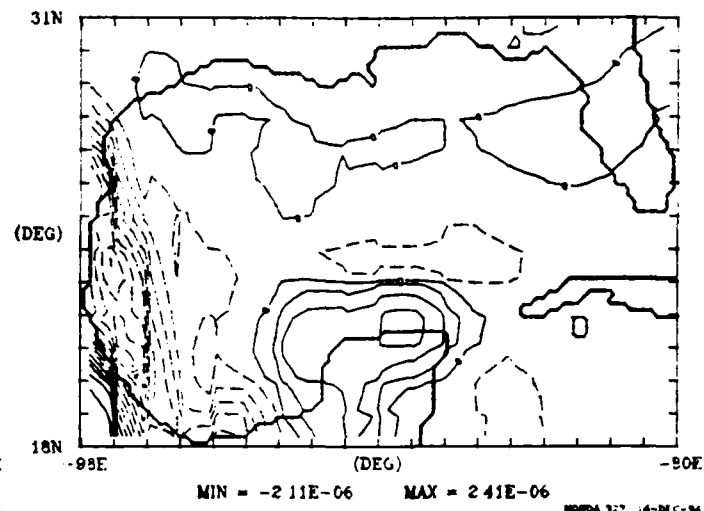
WIND STRESS CURL
MARCH/1982 DC = 2.0E-07 MKS



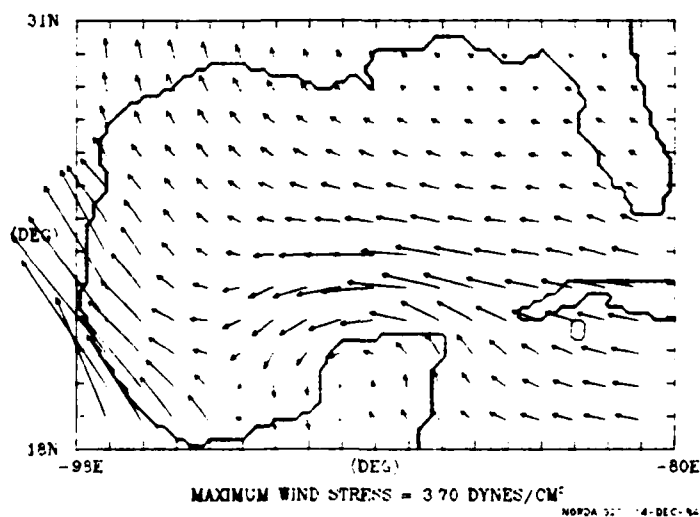
WIND STRESS
APRIL/1982



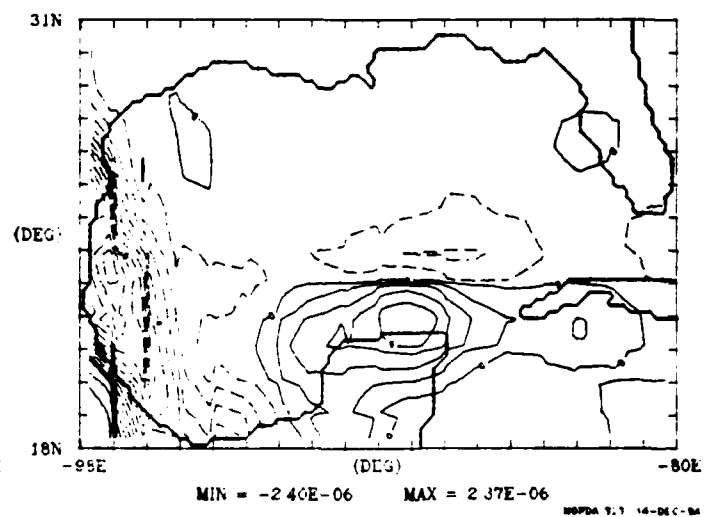
WIND STRESS CURL
APRIL/1982 DC = 2.0E-07 MKS



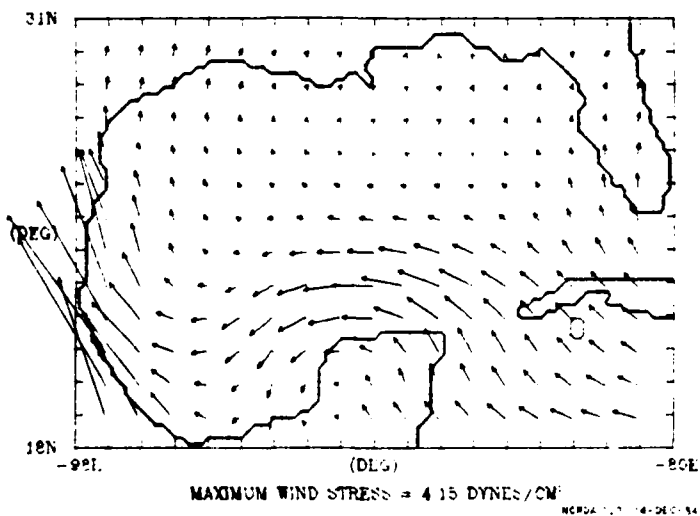
WIND STRESS
MAY/1982



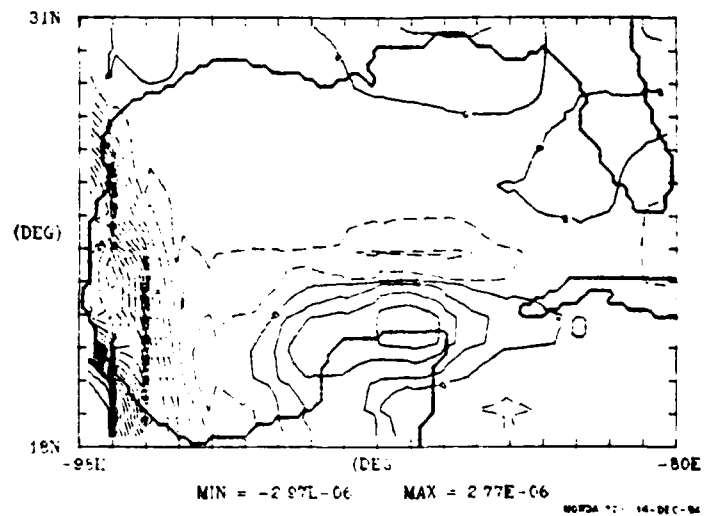
WIND STRESS CURL
MAY/1982 DC = 2.0E-07 MKS



WIND STRESS
JUNE/1982



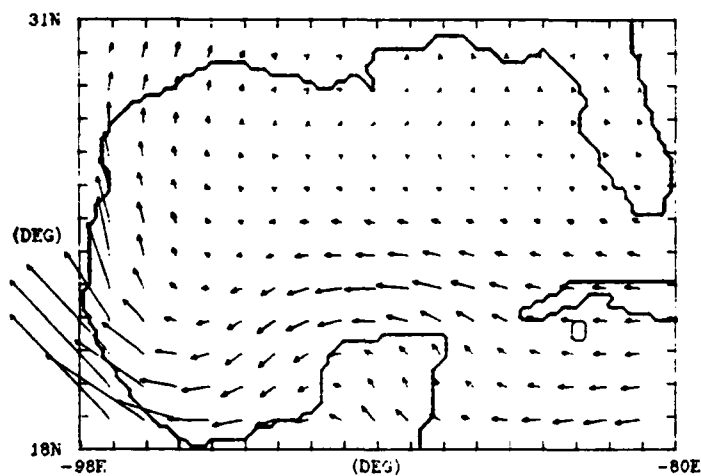
WIND STRESS CURL
JUNE/1982 DC = 2.0E-07 MKS



WIND STRESS

JULY/1982

10

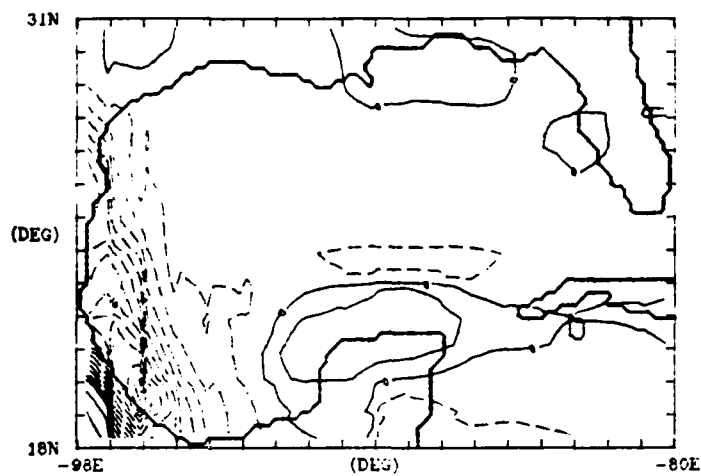


MAXIMUM WIND STRESS = 3.64 DYNES/CM²

NOFPA 7.7 14-DEC-84

WIND STRESS CURL

JULY/1982 DC = 2.0E-07 MKS



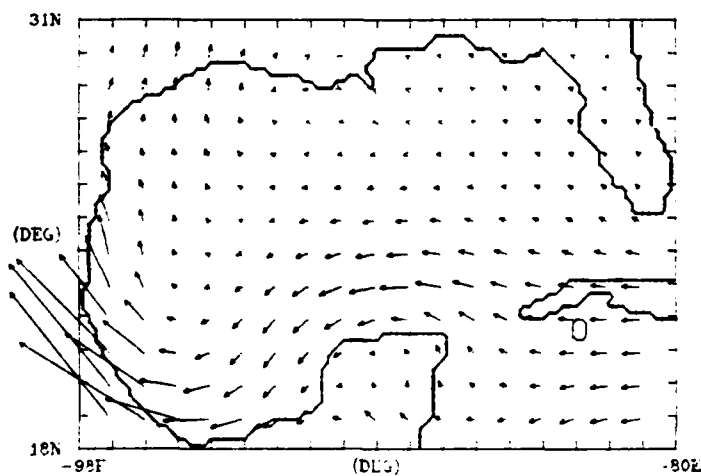
MIN = -2.55E-06 MAX = 2.08E-06

NOFPA 7.7 14-DEC-84

WIND STRESS

AUGUST/1982

10

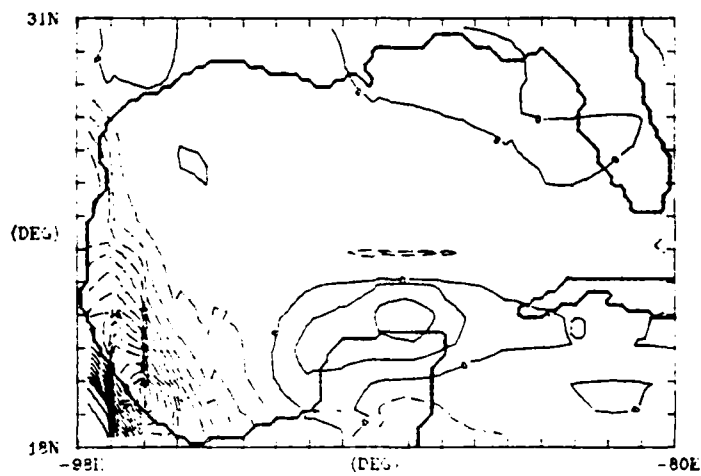


MAXIMUM WIND STRESS = 4.58 DYNES/CM²

NOFPA 7.7 14-DEC-84

WIND STRESS CURL

AUGUST/1982 DC = 2.0E-07 MKS



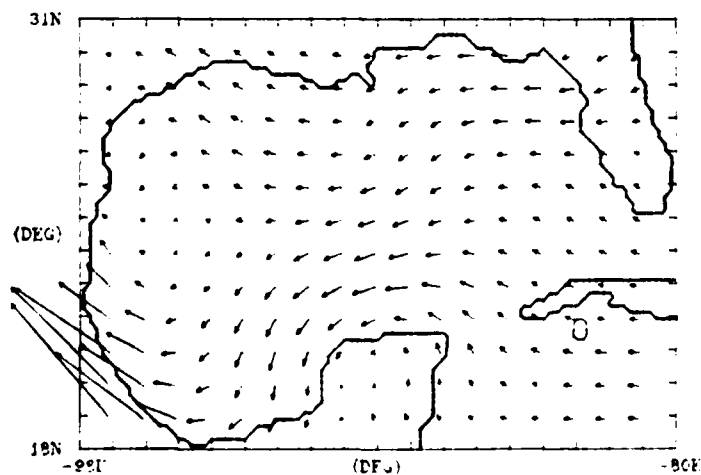
MIN = -3.24E-06 MAX = 2.78E-06

NOFPA 7.7 14-DEC-84

WIND STRESS

SEPTEMBER/1982

10

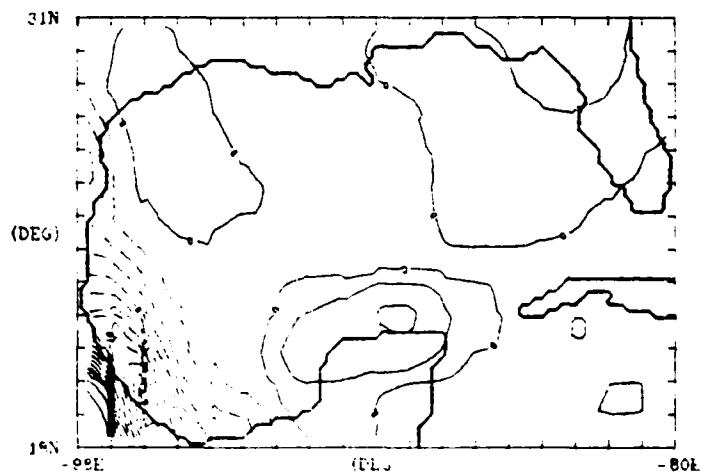


MAXIMUM WIND STRESS = 3.86 DYNES/CM²

NOFPA 7.7 14-DEC-84

WIND STRESS CURL

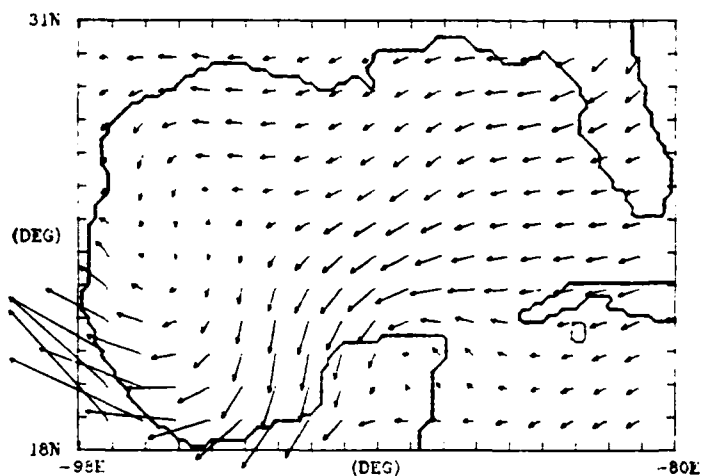
SEPTEMBER/1982 DC = 2.0E-07 MKS



MIN = -2.47E-06 MAX = 2.75E-06

NOFPA 7.7 14-DEC-84

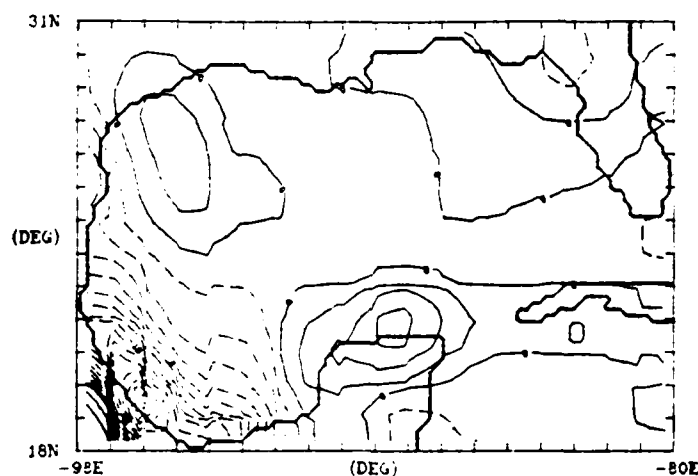
WIND STRESS
OCTOBER/1982



MAXIMUM WIND STRESS = 5.26 DYNES/CM²

NOFPA 9.7 14-DEC-84

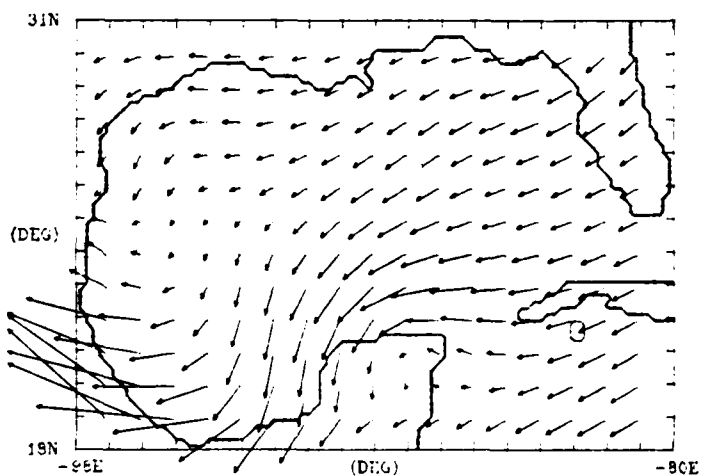
WIND STRESS CURL
OCTOBER/1982 DC = 2.0E-07 MKS



MIN = -3.02E-06 MAX = 3.02E-06

NOFPA 9.7 14-DEC-84

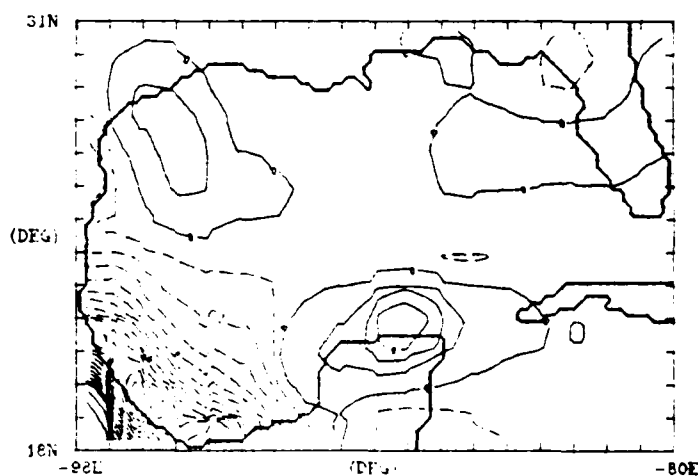
WIND STRESS
NOVEMBER/1982



MAXIMUM WIND STRESS = 6.24 DYNES/CM²

NOFPA 9.7 14-DEC-84

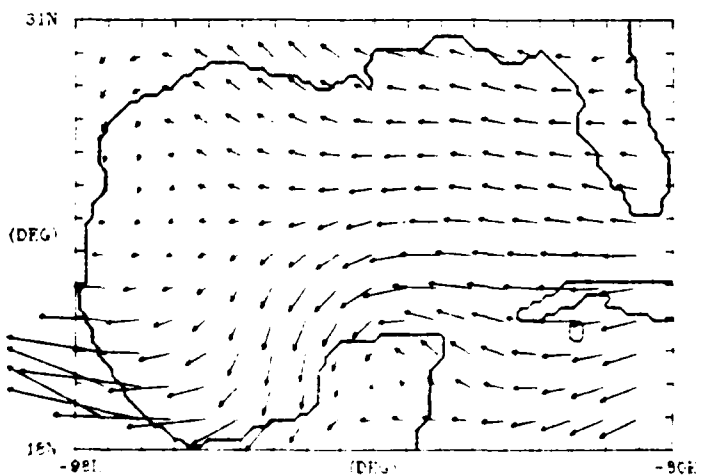
WIND STRESS CURL
NOVEMBER/1982 DC = 2.0E-07 MKS



MIN = -2.88E-06 MAX = 3.00E-06

NOFPA 9.7 14-DEC-84

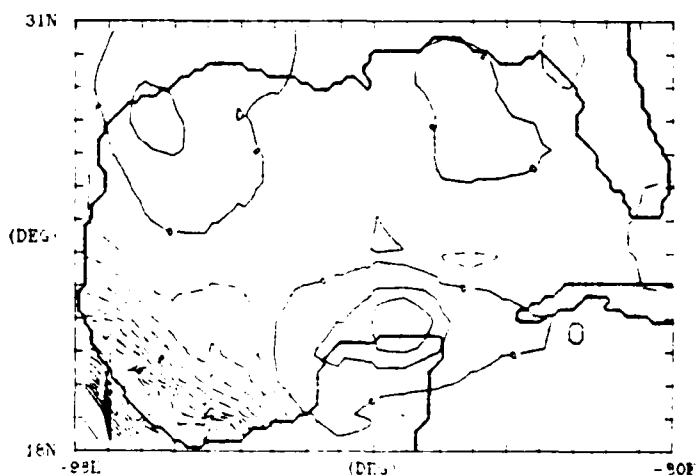
WIND STRESS
DECEMBER/1982



MAXIMUM WIND STRESS = 5.35 DYNES/CM²

NOFPA 9.7 14-DEC-84

WIND STRESS CURL
DECEMBER/1982 DC = 2.0E-07 MKS



MIN = -2.38E-06 MAX = 2.16E-06

NOFPA 9.7 14-DEC-84

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

ADA 169026

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION Unclassified		1b RESTRICTIVE MARKINGS None										
2a SECURITY CLASSIFICATION AUTHORITY		3 DISTRIBUTION AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.										
2b DECLASSIFICATION DOWNGRADING SCHEDULE												
4 PERFORMING ORGANIZATION REPORT NUMBER NORDA Technical Note 310		5 MONITORING ORGANIZATION REPORT NUMBER NORDA Technical Note 310										
6 NAME OF PERFORMING ORGANIZATION JAYCOR		7a NAME OF MONITORING ORGANIZATION Naval Ocean Research and Development Activity										
6c ADDRESS (City, State, and ZIP Code) 205 South Whiting Street Alexandria, Virginia 22304		7c ADDRESS (City, State, and ZIP Code) Ocean Science Directorate NSTL, Mississippi 39529-5004										
8a NAME OF FUNDING SPONSORING ORGANIZATION Naval Ocean Research and Development Activity	8b OFFICE SYMBOL (If applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER										
8c ADDRESS (City, State, and ZIP Code) Ocean Science Directorate NSTL, Mississippi 39529-5004		10 SOURCE OF FUNDING NOS. <table border="1"> <tr> <td>PROGRAM ELEMENT NO</td> <td>PROJECT NO</td> <td>TASK NO</td> <td>WORK UNIT NO</td> </tr> <tr> <td></td> <td>WF59-557</td> <td></td> <td></td> </tr> </table>		PROGRAM ELEMENT NO	PROJECT NO	TASK NO	WORK UNIT NO		WF59-557			
PROGRAM ELEMENT NO	PROJECT NO	TASK NO	WORK UNIT NO									
	WF59-557											
11 TITLE (Include Security Classification) Navy-Corrected Geostrophic Wind Set for the Gulf of Mexico												
12 PERSONAL AUTHOR(S) R. C. Rhodes*, A. J. Walcraft*, and J. D. Thompson**												
13a TYPE OF REPORT Final	13c TIME COVERED From To	14 DATE OF REPORT (Yr, Mo, Day) March 1985	15 PAGE COUNT 112									
16 SUPPLEMENTARY NOTES *with JAYCOR **with NORDA												
17 COSAT CODES <table border="1"> <tr> <td>FIELD</td> <td>GROUP</td> <td>SUBGROUP</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>		FIELD	GROUP	SUBGROUP							18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Gulf of Mexico, wind fields, geostrophic wind	
FIELD	GROUP	SUBGROUP										
19 ABSTRACT (Continue on reverse if necessary and identify by block number) <p>The large variability of the Gulf of Mexico wind field indicates that high-resolution wind data will be required to represent the weather systems affecting ocean circulation. This report presents methods and results of the calculation of a corrected geostrophic wind data set with high temporal and spatial resolution.</p> <p>Corrected geostrophic wind was calculated from surface pressure analyses compiled by the Fleet Numerical Oceanography Center. The correction factors for wind magnitude and direction were calculated using linear regressions of observed Gulf buoy winds and geostrophic winds derived at the buoys. The regressions were done for each month to determine the seasonal variability of the correction factors. The magnitude correction was found to be nearly constant (0.675) throughout the year, but the direction correction varied as a sine function dependent on the time of the year.</p>												
20 DISTRIBUTION AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED SAME AS RPT. <input checked="" type="checkbox"/> DTIC USER		21 ABSTRACT SECURITY CLASSIFICATION Unclassified										
22a NAME OF RESPONSIBLE INDIVIDUAL J. Dana Thompson		22b TELEPHONE NUMBER (Include Area Code) (601) 688-4625	22c OFFICE SYMBOL Code 323									

The corrected geostrophic wind was calculated twice daily from 1967–1982 on a spherical grid over the Gulf, and the wind stress and wind stress curl fields were then calculated. Twelve-hourly stress and curl fields show large temporal variations of the wind field for both winter and summer months. Seasonal and monthly climatologies of the stress and corresponding curl show positive curl over the Yucatan and negative curl in the southwest Gulf, which are features not seen in any previous study of Gulf wind stress.

END

DTIC

8-86